DOCUMENT RESUME

ED 146 008 SE 022 534

AUTHOR Conlon, Nancy M.; And Others
TITLE Characteristics of the National Sample of Scientists and Engineers 1974. Part 3. Geographic.
INSTITUTION National Science Foundation, Washington, D.C. Div. of Science Resources Studies.
REPORT NO NSF-76-330
PUB DATE Dec 76
NOTE 169p.; For Parts 1 and 2, see ED 128 190 and SE 022 423; Contains small print
AVAILABLE FROM Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 (Stock Number 038-000-00308-9, $2.00)

EDRS PRICE MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS Census Figures; Demography; *Employment Patterns; *Engineers; *Geographic Distribution; National Demography; Population Education; *Scientific Manpower; *Scientists; Surveys
IDENTIFIERS National Science Foundation

ABSTRACT

This is the third of three reports on the 1974 National Survey of Scientists and Engineers conducted by the Bureau of the Census for the National Science Foundation. It covers geographic characteristics of the almost 1.1 million persons in the National Sample. The data are reported in detailed statistical tables, with additional information provided on the nature of the study. A summary section discusses the data by states and by standard metropolitan statistical areas. Concentration, federal support, field, highest degree, type of employer, primary work activities, and salaries, are described for various geographic locations. (MS)

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ED146008

Surveys of Science Resources Series
National Science Foundation
NSF 76-330

Characteristics of the National Sample of Scientists and Engineers 1974

Part 3. Geographic

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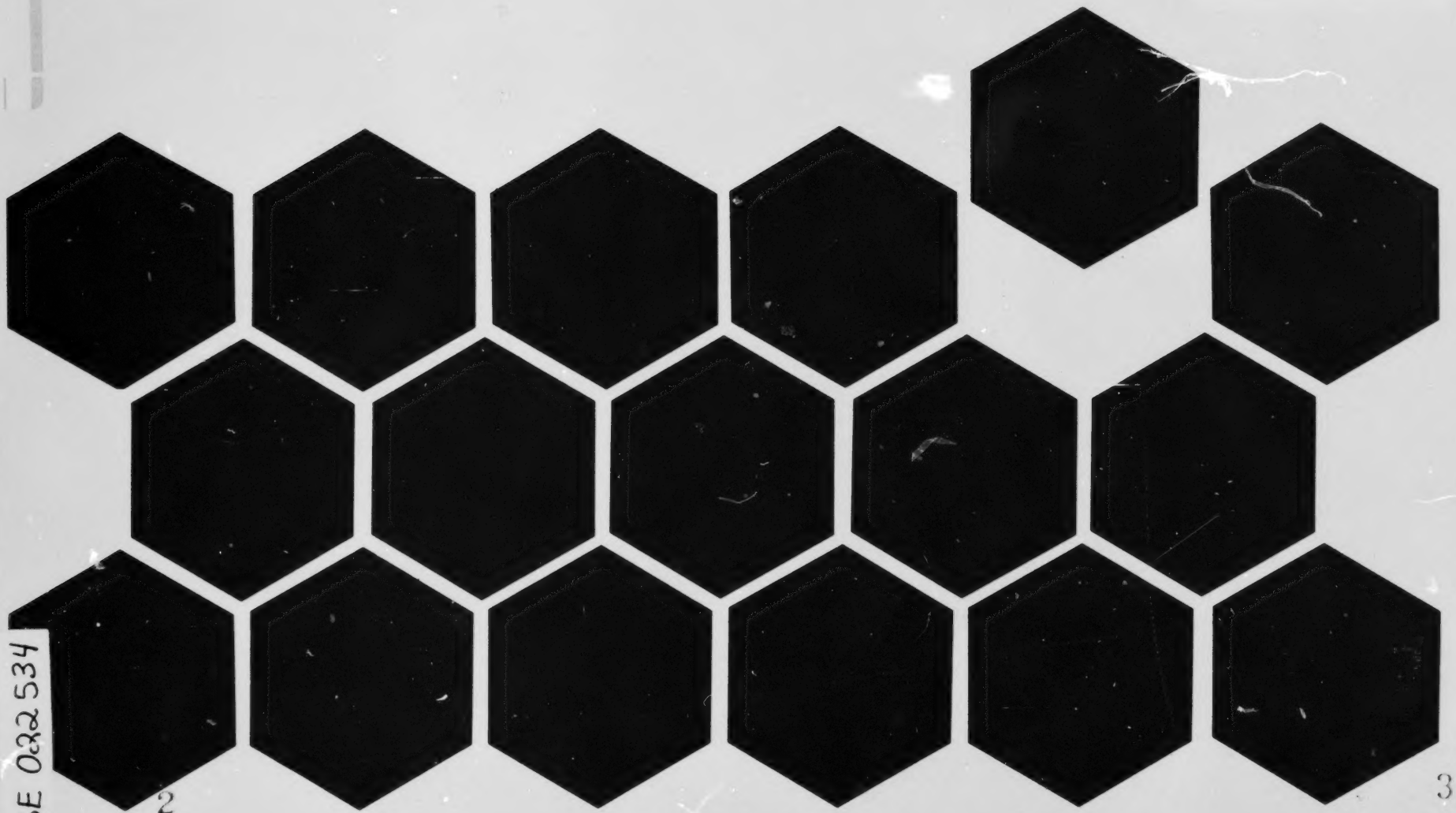

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Characteristics of the National Sample of Scientists and Engineers 1974

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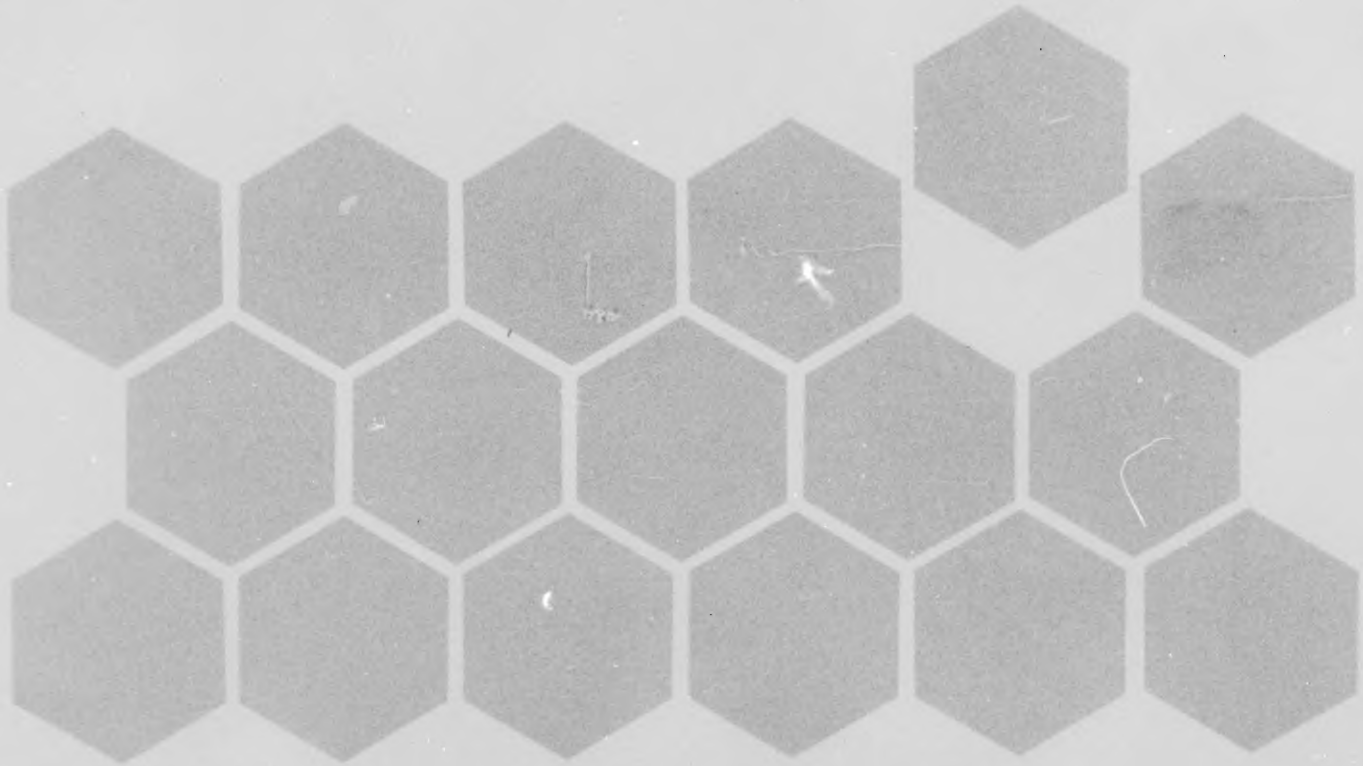

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FOREWORD

This volume is the third of three reports on the 1974 National Survey of Scientists and Engineers (National Sample) which was conducted by the Bureau of the Census for the National Science Foundation. The 1974 survey was the first in a series of longitudinal surveys designed to measure the changes in the characteristics of the Nation's scientists and engineers who were identified in the 1970 Census of Population. This is one of three subsystems of the Manpower Characteristics System which produces estimates for the total U.S. science and engineering population. The other two subsystems include the doctoral scientists and engineers in the Nation and other scientists and engineers who have entered science and engineering since 1970.

The initial NSF analysis of the 1974 National Sample was published in December 1975 and covered demographic and educational characteristics of the National Sample. The second report published in 1976 presented employment characteristics. This third and last report covers geographic characteristics of almost 1.1 million scientists and engineers of the National Sample.

We would like to thank the Bureau of the Census for their cooperation in conducting the survey, and also the 50,000 scientists and engineers in the sample who provided the data for this report.

The report was prepared in the Division of Science Resources Studies. Overall guidance was provided by Robert R. Trumble, Head, Manpower Studies Section.

Charles E. Falk
Director, Division of Science
Resources Studies

December 1976

general notes

Data included in this report are for the National Sample of Scientists and Engineers only.

The 1.1 million scientists and engineers represented by the National Sample in 1974 constitute about three-fifths of the estimated total scientists and engineers in the United States in 1974. The data presented here do not include those scientists and engineers who have entered science and engineering since April 1970 when the Decennial Census of Population was conducted.

Detailed data presented in the text tables may not add to the total because of rounding.

acknowledgments

This survey was planned and directed by J. James Brown, Study Director, Manpower Characteristics Studies Group. The report was prepared by Nancy M. Conlon with the assistance of Gayle F. Barker and John A. Scopino.

The survey was conducted by the Bureau of the Census. Principal participants were Paula J. Schneider, Mary K. Friday, Thomas J. Palumbo, Ann M. Gifford, and Patricia L. Marks. Overall direction was provided by Murray S. Weitzman, Assistant Division Chief (Socioeconomic Statistics Programs), Population Division. Invaluable assistance by all is gratefully acknowledged.

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INTRODUCTION

This is the third of three reports on the 1974 National Survey of Scientists and Engineers. It presents geographic data for members of the National Sample who responded to the 1974 survey and met the requirements for inclusion in one of eight fields of science or engineering. (See Appendix A, Technical Notes, "Definitions and Explanations.") These individuals and all others in the National Sample were identified as scientists and engineers in 1970.

The 1974 National Survey of Scientists and Engineers was the first in a series of planned longitudinal surveys to be conducted biennially on a sample of 50,000 scientists and engineers. Findings from the 1974 survey, and future surveys, will make possible the examination of changes in characteristics of scientists and engineers over a substantial period of time, as well as allowing for the provision of information for a specific point in time.

The data presented in the detailed statistical tables appearing in appendix B have not been rounded because standard error tables are provided for use by the reader. Although not every datum has a standard error printed herein, a range of values is provided so that an approximate standard error may be interpolated.

The technical notes in appendix A contain information on the sample, the questionnaire, definitions and explanations used in the survey, weighting and estimating procedures and standard errors of totals and percentages. Appendix C lists the detailed statistical tables which were published in parts 1 and 2. The questionnaire and reference lists used in the survey are reproduced in appendix D.

STATES

Concentration

In 1974 over one-half of the 1,080,000 scientists and engineers in the National Sample were located in three geographic divisions of the United States. The greatest concentration was in the Middle Atlantic States (New Jersey, New York, and Pennsylvania), 19 percent, followed by the East North Central States (Illinois, Indiana, Michigan, Ohio, and Wisconsin), 18 percent, and the Pacific States (Alaska, California, Hawaii, Oregon, and Washington), 17 percent. Six States reported over 50,000 scientists and engineers: California, Illinois, New York, Ohio, Pennsylvania, and Texas; these same six States also reported the highest population figures for 1974.[1] When the 392,000 scientists are viewed separately from engineers, New Jersey replaces Ohio in the listing of the top six States. The same pattern holds when data on employed scientists and engineers are reviewed.

[1] Bureau of the Census, Department of Commerce. *Population Estimates and Projections*, Series P-25, No. 533 (Washington, D.C. 20402: Supt. of Documents, U.S. Government Printing Office, October 1974).

Number of scientists and engineers in the National Sample by selected States: 1974

[In thousands]

State	Total			Employed		
	Total	Scientists	Engineers	Total	Scientists	Engineers
Total	1,080	392	688	1,013	366	648
California	143	43	99	133	41	93
New York	94	38	56	89	36	53
Pennsylvania	64	20	44	61	19	42
Texas	60	20	39	56	19	38
Ohio	56	16	40	53	15	38
Illinois	52	19	33	50	18	32
New Jersey	48	18	30	45	17	28

Note: Detail may not add to total because of rounding.
Source: National Science Foundation, National Sample, 1976.

Federal Support

Over one-third of the employed scientists and engineers in the National Sample were receiving some Federal support. The top six States, in terms of the number of those receiving support, include California, Maryland, Massachusetts, New York, Pennsylvania, and Texas. However, many States with fewer employed reported a higher proportion receiving Federal support. In Alabama, Alaska, Idaho, Maryland, Mississippi, Montana, Nevada, New Mexico, North Dakota, South Dakota, Utah, Virginia, and Washington more than 50 percent of the scientists and engineers received Federal support. The District of Columbia, reflecting high Federal employment, showed the highest proportion, 77 percent.

Number of employed scientists and engineers in the National Sample and percent receiving Federal support by State: 1974

State	Total employed	Percent receiving Federal support	State	Total employed	Percent receiving Federal support
Total	1,013,086	37	Missouri	18,376	40
Alabama	13,547	54	Montana	2,599	57
Alaska	1,757	71	Nebraska	4,409	33
Arizona	9,454	41	Nevada	1,438	62
Arkansas	3,656	34	New Hampshire	2,980	35
California	133,393	50	New Jersey	44,745	25
Colorado	17,133	46	New Mexico	7,389	75
Connecticut	22,383	36	New York	88,735	30
Delaware	5,425	7	North Carolina	14,807	23
Dist. of Columbia	20,152	77	North Dakota	1,833	74
Florida	23,105	45	Ohio	53,491	27
Georgia	13,509	38	Oklahoma	10,289	19
Hawaii	4,074	38	Oregon	9,576	40
Idaho	2,858	69	Pennsylvania	60,715	28
Illinois	49,557	22	Rhode Island	4,183	49
Indiana	18,864	22	South Carolina	7,869	31
Iowa	8,109	33	South Dakota	1,540	57
Kansas	7,565	36	Tennessee	14,751	43
Kentucky	7,530	28	Texas	56,471	30
Louisiana	14,006	23	Utah	6,240	52
Maine	2,356	36	Vermont	1,987	30
Maryland	28,921	70	Virginia	22,784	57
Massachusetts	39,642	41	Washington	23,007	58
Michigan	40,250	18	West Virginia	5,316	23
Minnesota	19,836	25	Wisconsin	16,250	25
Mississippi	6,027	53	Wyoming	2,420	46
			Other[1]	15,777	22

[1] Includes outlying areas of the United States, foreign, and State not reported.

Source: National Science Foundation, National Sample, 1974.

STANDARD METROPOLITAN STATISTICAL AREAS

Eighty-one percent of all scientists and engineers in the National Sample worked[2] in Standard Metropolitan Statistical Areas (SMSA's), 18 percent in nonmetropolitan areas, and 1 percent in foreign lands.

Computer specialists reported the highest proportion located in SMSA's, 88 percent; and agricultural scientists, the lowest, 40 percent. Nonmetropolitan areas accounted for large proportions of scientists and engineers in certain fields, namely agricultural, biological, earth sciences, and mathematics (58 percent, 32 percent, 26 percent, and 20 percent, respectively). Three percent of the earth scientists and sociologists/anthropologists in the National Sample were located in foreign lands.

Of the 235 Standard Metropolitan Statistical Areas designated by the Bureau of the Census, six accounted for almost one-fourth of the total National Sample in 1974. Only three other SMSA's each included over 20,000 scientists and engineers.

Field

Engineers comprised almost two-thirds of the scientists and engineers in the National Sample in 1974. Among the SMSA's, however, Los Angeles-Long Beach and Detroit reported three-fourths as engineers, and Boston, Philadelphia, and Houston, two-thirds or more. Of the nine areas having the largest number of scientists and engineers, only in Washington[3] did engineers comprise less than one-half of the group.

[2] Resided, if not working.

Standard Metropolitan Statistical Areas (SMSA's) with largest number of scientists and engineers in the National Sample: 1974

SMSA	Number of scientists & engineers
Los Angeles - Long Beach, Calif.	54,355
New York, N.Y.	50,113
Washington, D.C. - Md. - Va.	47,245
Chicago, Ill.	36,875
Philadelphia, Pa. - N.J.	30,654
Boston, Mass.	30,156
San Francisco - Oakland, Calif.	24,231
Detroit, Mich.	21,645
Houston, Texas	20,709

Source: National Science Foundation, National Sample, 1974.

Ph.D.'s in the Standard Metropolitan Statistical Areas (SMSA's) having largest number of scientists and engineers in the National Sample: 1974

SMSA	Number of Ph.D.'s	Number of scientists & engineers	Percent of Ph.D.'s to total scientists & engineers
Los Angeles-Long Beach, Calif	5,893	54,355	10.8
New York, N.Y.	9,368	50,113	18.7
Washington, D.C.-Md.-Va	11,538	47,245	24.4
Chicago, Ill	4,962	36,875	13.5
Philadelphia, Pa.-N.J.	4,511	30,654	14.7
Boston, Mass	5,673	30,156	18.8
San Francisco-Oakland, Calif	4,507	24,231	18.6
Detroit, Mich	2,323	21,645	10.7
Houston, Texas	2,273	20,709	11.0

Source: National Science Foundation, National Sample, 1974.

In five of the top nine areas, Philadelphia, Chicago, San Francisco-Oakland, Boston, and Detroit, chemists reported the second highest proportion with 12 percent, 11 percent, 10 percent, 7 percent, and 7 percent, respectively. In the United States, as a whole, they comprised 8 percent of the total.

Highest Degree

The proportion of those working in SMSA's in the National Sample in 1974 was lowest for doctoral scientists and engineers with 76 percent, and highest for professional/medical degree-holders, with 88 percent. This is due, in part, to the fact that over one-half of the doctoral scientists and engineers are employed by educational institutions, which are frequently located in nonmetropolitan areas. The category with the largest proportion in foreign lands was the doctoral group with 2 percent.

Among SMSA's which contained at least 20,000 scientists and engineers in the National Sample in 1974, Washington (with 24 percent) showed a markedly higher proportion of doctorates relative to the other SMSA's and to the United States as a whole. (Doctorates comprised 17 percent of the total National Sample in 1974.) Boston, New York, and San Francisco-Oakland all reported 19 percent of their National Sample populations as doctorates; Detroit, Houston, and Los Angeles-Long Beach reported the lowest proportion of doctorate-holders, all at 11 percent.

[3] District of Columbia SMSA, unless otherwise designated.

Type of Employer

Among all types of employers, hospitals and clinics reported the highest proportion of scientists and engineers working in SMSA's—87 percent; and 4-year colleges and universities the lowest—68 percent. Scientists and engineers employed in "other governments" showed the highest proportion working in foreign lands—4 percent; those in 4-year colleges and universities reported the next highest—2 percent.

Seven of the nine largest SMSA's reported higher proportions working in business and industry than did the total National Sample which registered 56 percent. Detroit had the largest representation in business and industry, 76 percent, and Houston, the second largest, 73 percent. In part, this is because large automotive and petroleum plants are located in these two SMSA's.

Only in San Francisco-Oakland and Washington were the proportions working in business and industry lower than that for the total, 46 percent and 18 percent, respectively.

San Francisco-Oakland (of the 9 largest National Sample SMSA's) reported the highest proportion of scientists and engineers in educational institutions in 1974—16 percent. This area—along with Boston and New York, which reported 14 percent and 13 percent, respectively—were three of the four top SMSA's in terms of doctoral scientists and engineers. The above three areas were similar in proportion in educational institutions to that for the total National Sample—13 percent. Of the nine areas being discussed, the smallest proportions in educational institutions were registered in Washington and Houston—5 percent and 4 percent, respectively.

The Federal Government employed 10 percent of the National Sample in 1974 and was its third-largest type of employer. Twenty-three percent of the Federal scientists and engineers were located in Washington, and an additional 19 percent, including large numbers of agricultural and biological scientists, worked in nonmetropolitan areas. The remaining 58 percent were widely distributed among the other SMSA's with the largest representation at government installations such as Huntsville, Ala. (3,217) and Dayton, Ohio (2,639).

One-fourth of those working for nonprofit organizations in the National Sample were located in either Los Angeles-Long Beach, or Washington. Collectively, New York, Chicago, Boston, and San Francisco-Oakland accounted for another fourth.

Scientists and engineers in the National Sample working in Standard Metropolitan Statistical Areas (SMSA's) by type of employer: 1974

Type of employer	Employed scientists & engineers in SMSA's	Employed scientists & engineers	Percent employed in SMSA's
Total	821,280	1,013,086	81.1
Business & industry	477,316	566,961	84.2
Educational institutions	93,734	134,910	69.5
4-Year colleges & universities	79,103	115,440	68.5
2-year colleges	6,910	9,828	70.3
Other educational institutions	7,721	9,642	80.1
Hospital/clinic	8,177	9,433	86.7
Nonprofit organizations	24,077	28,292	85.1
Federal Government	78,596	99,421	79.1
Military	2,612	3,172	82.3
State & local government	57,768	73,769	78.3
Other government	15,575	19,150	81.3
Other	63,318	75,677	83.7
Not reported	107	2,301	4.6

Source: National Science Foundation, National Sample, 1974.

Primary Work Activity

Within each of the work activities, managers or administrators of research and development in the National Sample in 1974 reported the highest proportion working in SMSA's, 86 percent, and teaching reported the lowest, 69 percent. Basic research showed the highest proportion working in foreign lands, 3 percent.

Thirty percent of the National Sample was engaged in research and development in 1974. Six of the nine SMSA's which included 20,000 or more scientists and engineers reported larger proportions in research and development than did the total group. Of the nine, Philadelphia and San Francisco were highest in research and development, with 37 percent and 36 percent, respectively, and New York, Washington, and Houston, lowest, with 25 percent each.

The National Sample as a whole reported 4 percent in basic research and 5 percent in applied research in 1974. Of the nine largest SMSA's, scientists and engineers in San Francisco-Oakland reported the largest proportion in basic research (9 percent), and Detroit, the lowest (1 percent). Washington reported the highest proportion in applied research (10 percent), and New York, the lowest (4 percent).

Whereas 20 percent of the National Sample worked in development and design, over one-fourth of those in each of the following SMSA's—Detroit, Los Angeles-Long Beach and Philadelphia—were engaged in this activity. In each of these SMSA's engineers constituted a large group—at least two-thirds of the total.

The proportion of those in management or administration for the same nine SMSA's spanned a range of 25 percent (for San Francisco-Oakland) to 34 percent (for Washington), with the total National Sample proportion at 27 percent.

Washington and San Francisco-Oakland (of the same nine) also reported the highest and lowest (21

percent and 7 percent, respectively) participation rates for the management or administration of research and development. Six of the nine SMSA's reported proportions working in management or administration of research and development higher than that of 10 percent for the total National Sample.

Twenty-three percent of those scientists and engineers in the National Sample in the Houston SMSA worked in the management or administration of other than research and development. This was more than 4 percentage points higher than the next largest representation—19 percent for the New York SMSA. Philadelphia showed the smallest proportion, 14 percent. Overall, those working in this activity constituted 17 percent of the employed National Sample.

Research and development and management or administration accounted for 57 percent of the employed scientists and engineers. The remaining 43 percent were distributed among teaching, consulting, production and inspection, and other activities.

The nine largest SMSA's in the National Sample showed participation rates between 3 percent and 7 percent in teaching. These SMSA's, of course, house large numbers of educational institutions. In eight of the same nine SMSA's, production and inspection accounted for 10 percent to 15 percent of each SMSA total. Only in Washington did this work activity account for as few as 5 percent. New York showed the highest proportion of consultants, 10 percent; Detroit and Philadelphia the lowest, 5 percent.

Salaries

Among the National Sample group in 1974, salaries for those working in SMSA's exceeded those in nonmetropolitan areas by $1,300. Differences in median annual salaries between those working in metropolitan areas and those not varied by as much as $3,000 for economists and as little as $100 for atmospheric scientists.

Median annual salaries of scientists and engineers in the National Sample working in Standard Metropolitan Statistical Areas (SMSA's) and in non-SMSA's by field: 1974

Field	SMSA's	Non-SMSA's	Difference
Total	$19,600	$18,300	$1,300
Physical scientists	19,700	18,700	1,000
Chemists	19,000	18,300	700
Physicists/astronomers	21,800	19,200	2,600
Other physical scientists	22,200	20,200	2,000
Mathematical scientists	20,000	19,200	800
Mathematicians	19,900	19,200	700
Statisticians	20,200	19,200	1,000
Computer specialists	18,500	17,700	800
Environmental scientists	20,500	18,500	2,000
Earth scientists	20,300	18,100	2,200
Oceanographers	20,900	(1)	NA
Atmospheric scientists	22,300	22,200	100
Engineers	19,600	18,500	1,100
Life scientists	18,700	16,700	2,000
Biological scientists	18,200	17,200	1,000
Agricultural scientists	18,800	16,400	2,400
Medical scientists	20,100	19,100	1,000
Psychologists	19,800	18,400	1,400
Social scientists	20,600	18,000	2,600
Economists	22,800	19,800	3,000
Sociologists/anthropologists	19,300	17,900	1,400
Other social scientists	19,000	17,200	1,800

[1] Less than 20 sample cases reported.
Source: National Science Foundation, National Sample, 1974.

Those who worked in the Washington SMSA reported the highest median annual salary in the Nation ($23,900). This was followed by Norwalk, Conn. ($22,600), Huntsville, Ala. ($22,500), and Champaign-Urbana, Ill. ($22,400).

All nine of the largest National Sample SMSA's reported salaries at, or above, the level of the total median for the scientists and engineers in the National Sample ($19,300).

Median annual salaries of Standard Metropolitan Statistical Areas (SMSA's) with largest number of scientists and engineers in the National Sample: 1974

SMSA	Median annual salary
Los Angeles - Long Beach, Calif.	$19,700
New York, N.Y.	$20,500
Washington, D.C. - Md.-Va.	$23,900
Chicago, Ill.	$19,300
Philadelphia, Pa.-N.J.	$19,800
Boston, Mass.	$20,400
San Francisco - Oakland, Calif.	$19,600
Detroit, Mich.	$20,300
Houston, Texas	$20,100

Source: National Science Foundation, National Sample, 1974.

The Washington SMSA was first in the Nation in salary for the following work activities: total research and development, total management or administration, management or administration of research and development, and management or administration of other than research and development. Of the top nine SMSA's, it also reported the highest median salary for all work activities except teaching and consulting.

In terms of working in basic research, Newark, N.J. ($22,900), Denver, Colo. ($22,800) and San Jose, Calif. ($22,600) placed higher than Washington. In applied research, only Wilmington, Del. ($22,600) had a higher median salary than Washington. Wilmington, Del. and Bridgeport, Conn. showed the two highest median annual salaries, $20,600 and $20,400, respectively in development and design.

SMSA's in which universities play a dominant role (such as Lafayette—West Lafayette, Ind. and Ann Arbor, Mich.) reported the top two salaries in teaching ($26,800 and $25,700, respectively.)

Baltimore, Md. reported the highest median annual salary in consulting ($26,000); Anaheim—Santa Ana—Garden Grove, Calif. was second with $23,800.

Median annual salaries in the largest[1] Standard Metropolitan Statistical Areas (SMSA's) by primary work activity: 1974

SMSA	Total	Research and development				Management or administration			Teaching	Production and inspection	Consulting	Other activities
		Total R&D	Basic research	Applied research	Development and design	Total	Of R&D	Other than R&D				
Total, all SMSA's	$19,600	$18,600	$19,000	$20,000	$18,300	$23,000	$24,900	$21,900	$19,700	$17,800	$20,000	$18,200
Los Angeles-Long Beach, Calif.	19,700	18,600	17,400	21,300	18,300	23,300	24,900	22,300	21,100	17,700	20,400	19,000
New York, N.Y.	20,500	19,700	19,400	22,000	19,500	23,100	25,800	21,600	22,500	18,400	19,900	18,900
Washington, D.C.-Md.-Va.	23,900	21,800	21,300	22,400	20,200	27,800	28,500	26,700	19,500	21,700	22,600	20,800
Chicago, Ill.	19,300	17,500	19,900	18,400	17,000	23,700	23,500	23,800	19,600	18,500	20,300	17,000
Philadelphia, Pa.-N.J.	19,800	18,400	18,900	18,000	18,400	24,600	25,500	22,900	18,600	17,800	22,200	19,100
Boston, Mass.	20,400	19,000	19,600	21,400	18,600	24,800	26,200	23,500	19,200	17,000	20,700	18,800
San Francisco-Oakland, Calif.	19,600	18,900	18,100	21,000	18,600	22,800	25,700	20,800	18,800	18,900	20,700	17,000
Detroit, Mich.	20,300	19,600	(2)	20,900	19,400	23,400	25,300	22,500	18,500	18,900	22,800	18,900
Houston, Texas	20,100	19,200	(2)	20,800	19,100	23,200	22,200	23,600	21,200	18,800	21,200	18,600

[1] "Largest" here means those SMSA's having the largest number of National Sample scientists and engineers in 1974.

[2] Less than 20 sample cases reported.

Source: National Science Foundation, National Sample, 1974.

Rochester, N.Y. reported the highest median annual salary for doctorate-holders ($26,100); Tallahassee, Fla. and Washington showed the second- and third-highest salaries for Ph.D.'s ($25,900 and $25,500, respectively.) The doctorate-holders in the nine largest SMSA's reported salaries higher than the aggregate of all doctorate-holders in the National Sample.

Norwalk was listed as having the highest median annual salary for those in business and industry in 1974—$22,600. All nine largest SMSA's except Chicago reported higher median annual salaries for business and industry than the median salary for the total SMSA group in business and industry.

Five SMSA's—Boston, Detroit, Los Angeles—Long Beach, Philadelphia, and San Francisco—Oakland—of the nine largest SMSA's reported median annual salaries lower than the overall median for all SMSA scientists and engineers working in 4-year colleges and universities. On the other hand, smaller SMSA's (where colleges and universities play a larger role such as Milwaukee, Wis. ($24,000), Albany-Schenectady-Troy, N.Y. ($23,700), and Ann Arbor, Mich. ($23,500) reported the highest median annual salaries for this type of employer.

With regard to those employed by the Federal Government, only three SMSA's (Washington, Houston, and Boston) of the nine largest reported higher median salaries than those employed in all SMSA's. Two SMSA's with large Government installations, Newport News-Hampton, Va. ($25,-100) and Huntsville, Ala. ($24,500) reported the highest median annual salaries.

Median annual salaries in the largest[1] Standard Metropolitan Statistical Areas (SMSA's) by type of employer: 1974

SMSA	Total	Business & industry	4-Year colleges & universities	2-year colleges	Hospital/ clinic	Nonprofit organi-zations	Government				Other
							Federal	State	Local	Other	
Total, all SMSA's	$19,600	$19,200	$19,800	$18,300	$17,700	$20,400	$22,300	$16,800	$19,000	$19,100	$19,900
Los Angeles-Long Beach, Calif.	19,700	19,800	19,300	21,000	19,200	21,600	19,700	16,000	19,500	19,100	19,800
New York, N.Y.	20,500	20,600	21,200	24,000	17,900	18,800	20,600	19,600	17,200	26,000	20,800
Washington, D.C.,-Md.-Va.	23,900	22,300	20,100	[2]	[2]	24,000	24,600	[2]	24,200	[2]	21,000
Chicago, Ill.	19,300	19,000	19,900	19,100	20,500	20,800	21,700	[2]	19,800	20,100	19,300
Philadelphia, Pa.-N.J.	19,800	19,400	19,500	[2]	[2]	22,200	20,700	[2]	21,000	[2]	21,000
Boston, Mass.	20,400	20,200	18,900	[2]	[2]	22,800	22,600	16,300	[2]	[2]	20,800
San Francisco-Oakland, Calif.	19,600	20,000	18,300	19,200	[2]	17,600	20,800	17,800	19,300	[2]	17,700
Detroit, Mich.	20,300	20,100	19,600	[2]	[2]	[2]	[2]	[2]	[2]	21,300	21,700
Houston, Texas	20,100	19,900	23,500	[2]	[2]	[2]	22,800	[2]	[2]	19,700	19,400

[1] "Largest" here means those SMSA's having the largest number of National Sample Scientists and Engineers in 1974.

[2] Less than 20 sample cases reported.

Source: National Science Foundation, National Sample, 1974.

APPENDIXES

A. Technical Notes
B. Detailed Statistical Tables
C. A Listing of Detailed Statistical Tables In Parts 1 and 2
D. Reproduction of 1974 Questionnaire and Reference Lists

APPENDIX A

Technical Notes

The 1974 National Sample

The 1974 National Survey of Scientists and Engineers was the first in a series of planned longitudinal surveys based on the National Sample. A previous survey, the 1972 Professional, Technical, and Scientific Manpower Survey was conducted among a nationwide sample of approximately 150,000 persons who were recorded in the 1970 Census of Population as being in the experienced civilian labor force in one of 65 engineering, scientific, or related occupations. Also, the survey included a small sample of persons who had completed four or more years of college but were not in any of the specified occupations. Based on responses in the 1972 survey and on criteria established by the National Science Foundation, approximately 51,000 persons from the 1972 survey sample (excluding the small sample of college graduates) were chosen as the National Sample for the 1974 National Survey of Scientists and Engineers.[1] Survey questionnaires were mailed to this abbreviated sample in February 1974. Data collection activities continued to August 1974. Completed questionnaires were obtained for 87.7 percent of the sample—approximately 44,000 persons. The 12.3 percent from whom completed questionnaires were not received include persons who either refused to participate, were deceased, or were persons who returned questionnaires with insufficient information to permit processing. In addition, 10.1 percent of the group moved out of science and engineering fields in 1974 leaving a sample of 40,000 persons in science and engineering in 1974.

[1] For a description of the selection process, see "Sample Selection Process for the 1974 Survey," p. 20.

Therefore, of the original 1,400,000 scientists and engineers whom the sample represented in 1972, 12.3 percent (172,000) did not respond, and 10.1 percent (148,000) represented those who did not meet the criteria for inclusion as scientists and engineers in 1974. As a result, 1,080,000 scientists and engineers remained in 1974 and it is this group with which this report is concerned.

For each sample case for which a completed quesionnaire was obtained, the information from the 1974 survey was matched with 1972 survey data and 1970 census data for the same person. Weights applied to sample cases in the 1972 survey were then used to weight the resultant matched data file up to universe totals. The use of the 1972 survey weights means that no adjustment for nonresponse was made to 1974 survey results.

Respondents[2] to the 1974 National Survey of Scientists and Engineers were classified, again based on criteria of the National Science Foundation, into one of the fields of science and engineering, or the category "not in a field of science and engineering in 1974."

The Questionnaire

Each panel member in the 1974 National Survey of Scientists and Engineers was asked to complete by self-enumeration a 4-page questionnaire (reproduced in appendix D). A cover letter was printed on page 1 of the questionnaire, and a set of reference lists (also reproduced in appendix D) was attached to the questionnaire. The reference lists were used by respondents to self-code answers to inquiries on major field of study (question 2, part b5 of the questionnaire), kind of business (question 11), occupation (question 12), and professional identification (question 20).

Definitions and Explanations

Fields of science and engineering—Science or engineering fields are categories established to identify persons who could be classified as engineers or scientists under most definitions. In general, to be classified into one of the fields, a person had to have at least two of the following three characteristics:

(1) Employment in the field; (2) attainment of a specified educational level in an academic discipline related to the field; or (3) self-identification, based upon total education and experience, as being in the field. More detailed information on the criteria for membership in a scientific and technical field is given further on in the section, "Criteria for Fields of Science or Engineering in 1974."

[2] The words "respondent" or "nonrespondent," when applied to members of the universe, refer to the number in the universe represented by sample persons who responded or did not respond, respectively, to the 1974 survey.

The fields of science and engineering for which data are presented in this report and the detailed fields they comprise are as follows:

Physical scientists
- Chemists
- Physicists and astronomers
- Other physical scientists

Mathematical scientists
- Mathematicians
- Statisticians

Computer specialists

Environmental scientists
- Earth scientists
- Atmospheric scientists
- Oceanographers

Engineers

Life scientists
- Agricultural scientists
- Biological scientists
- Medical scientists

Psychologists

Social scientists
- Economists
- Sociologists and anthropologists
- Other social scientists

Standard Metropolitan Statistical Areas (SMSA's.) In general, a Standard Metropolitan Statistical Area is a county or group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000. The data in this report are restricted to SMSA boundaries as defined for the 1970 Census of Population. For more information, see **1970 Census of Population,** Volume 1, **Characteristics of the Population,** Part 1, **United States Summary.**

Highest degree held—Highest degree held in 1974 refers to the highest academic degree awarded or assumed to have been awarded to the respondent in 1973 or earlier. Data on the highest degree held were derived as follows. First, question 2 of the 1974 questionnaire was reviewed to determine the highest degree worked for by the respondent *since 1971*. This degree was accepted as the highest degree received since 1971 if the respondent reported that it had been awarded in 1972 or 1973, or if he failed to indicate when it had been awarded, but did report the completion of at least a certain number of years of postsecondary education in question 1. The required years for each degree are specified in the following tabulation:

Degree	Minimum years of postsecondary education
No degree	0
Other	0
A.A.	2
R.N.	3
B.A.	4
M.A.	5
LL.B.	7
M.D.	8
Ph.D.	7

Second, the highest degree received since 1971 was designated as the highest degree held by the respondent *in 1974* if it was at the same or at a higher academic level than the highest degree reported in the 1972 survey. Otherwise, the highest degree reported in 1972 was designated as the highest degree held in 1974.

The "other degree" classification includes persons whose highest academic degree was one of the following: R.N., LL.B., M.D., and academic degrees other than those shown.

Except for engineers, the criteria for inclusion in a scientific or engineering field required that a person possess an academic degree at the bachelor's level or higher. Therefore, only engineers and persons "not in a field of science or engineering" can have an "associate degree" or "no degree."

Type of employer. The data on type of employer in 1974 are based on responses to question 11, industry or kind of business, and question 15, class of worker. If a respondent reported the industry, "educational institution" or "military" in question 11, he was classified in this category regardless of his class of worker. Otherwise, the person was classified according to the response in the class of worker item. The category "other government" includes "State government," "local government," and "employee of international organization"; "self-employed" includes "own business-not incorporated" and "working without pay. . ."; and "industry or business" includes "employee of private company. . ." and "own business-incorporated."

Basic annual salary rate. The statistics on salary refer to the basic annual salary associated with the job held in January 1974. The figures relate to salary before deductions for income tax, social security, retirement, etc., but do not include bonuses, overtime pay, or earnings from secondary jobs. For employees of educational institutions whose salary was for 9 or 10 months, the salary rate was adjusted to a 12-month basis. Median salaries were derived by an estimation process that distributed the subject populations into $1,000 intervals.

Divisions of the United States. The divisions of the United States comprise the following states:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Middle Atlantic: New York, New Jersey, Pennsylvania

East North Central: Illinois, Indiana, Michigan, Ohio, Wisconsin

West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia

East South Central: Alabama, Kentucky, Mississippi, Tennessee

West South Central: Arkansas, Louisiana, Oklahoma, Texas

Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming

Pacific: Alaska, California, Hawaii, Oregon, Washington

Outlying areas of the United States include Puerto Rico, Guam, Virgin Islands, American Samoa, Canal Zone, and Trust Territory of the Pacific Islands.

Source of Data Items

Characteristic	Item number on 1974 questionnaire[1]	Source code[2] on 1974 questionnaire
Selected SMSA's of residence: 1974*	A or B, page 1	010,011
Selected SMSA's of employment: 1974*	Part III, col. A:10	044,046
Highest degree held*	1; 2 (parts b2, b3, and b4); otherwise from 1972 survey response	012, 017-025
Basic annual salary: 1974*	Part III, col. A:17	062, 064, 066
Primary work activity in 1974	Part III, col. A:13, 14	052
Type of employer: 1974*	Part III, col. A: 11, 15	048, 056
State of residence	A or B, page 1	010, 011
State of employment	Part III, col. A:10	046
Federal support	Part III, col. A:18a	068
Agency of support	Part III, col. A:18b	070, 072, 074, 076, 078

* For more information, see appropriate subject in section of text on "Definitions and Explanations."

[1] The 1974 National Survey of Scientists and Engineers questionnaire is reprinted in appendix D.

[2] Source codes refer to sections of the 1974 questionnaire denoted by a 3-digit number inside a circle, e.g. (012) for the "Educational Attainment" section of page 2.

Criteria for Fields of Science or Engineering in 1974

(Developed by the National Science Foundation)

Respondents in the 1974 National Survey of Scientists and Engineers were classified into a specific field of science and engineering in 1974 if they met, in relation to the specific field, any one of the criteria given below. Classification by these criteria proceeded such that all respondents were initially examined by the first criterion; those not placed into a field by the first criterion, were then examined by the second; those not categorized by the second, were examined by the third; and so on, until only those remained who met none of the criteria—these were classified as "not in a field of science or engineering in 1974." The academic degree levels and major fields of study used in these criteria refer to the highest degree held. The coincident and related fields of study and the coincident and related occupations and professions are shown in table A-1. Occupation refers to the most recent job for which occupation was reported.

THE CRITERIA

A member of a field of science or engineering in 1974 is an individual (1) who had earned a master's degree or higher[3] in a coincident field of study and who regarded himself, based on his to education and experience, as having a coincident profession; or (2) who had earned a Ph.D. in any field of social or natural science,[4] and was employed in a coincident occupation; or (3) who had earned a bachelor's degree or higher in a coincident field of study, and was employed in a coincident occupation; or (4) who had earned a bachelor's degree or higher in any field of study, was employed in a coincident occupation, and regarded himself as having a coincident profession; or (5) whose highest degree[5] was in a coincident field of study[6], and who was employed as a college president, college dean, or manager or administrator of research or development, production or operations[7] or (6) who had earned a bachelor's degree or higher in a coincident field of study,[8] was employed in a related occupation, and regarded himself as having a coincident profession; or (7) who had earned a bachelor's degree in a coincident field of study since 1969 and who regarded himself as having a coincident profession; or (8)

[1] Engineers could meet this requirement with a bachelor's degree or higher.
[2] Codes 501-587 and 593 from list A of appendix D.
[3] At the bachelor's level or higher.
[4] Certain coincident fields of study are common to two fields of science or engineering. Therefore, persons meeting criterion 5 with field of study represented by codes 508 or 526 of list A of appendix were classified exclusively as "biological scientists"; those with codes 565 or 568, were classified exclusively as "other physical scientists"; and those with code 581, were classified exclusively as "economists."
[5] Codes 457-459 of list C of appendix D.
[6] In addition to a coincident field of study, engineers could have earned a bachelor's degree or higher in codes 508, 529, 557, 559-561, 563-568 of list A of appendix D.

Table A-1.—Coincident and related major fields of study, occupations, and professions, by field of science or engineering in 1974

[Codes are from reference lists A and C of appendix D]

Field of science or engineering in 1974	Major field of study		Occupation and profession	
	Coincident	Related	Coincident	Related
Computer specialists	559	501-526,532-558,560-568	415-417	401-413,415-417,419-438
Engineers	532-550	508,529,557,559-561 563-568,	401-413	457-459
Mathematical scientists:				
Mathematicians	557	532-550,558-568,576	419	401-413,415-417,419-438
Statisticians	558	518,532,535-545,548 550,557,559-572,575, 576,586,587	420	401-413,415-417,419-438
Life scientists:				
Agricultural scientists	501-503,506,512, 514-517,519,523, 524,526,	504,505,507-511,513, 518,520-522,525,532-568	428	401-413,415-417,419-433, 438
Biological scientists	504,505,507-511, 513,518,520-522, 525,526,554	501-503,506,512,514-517,519,523 524,532-553,555-568	429,431,433	401-413,415-417,419-433, 438
Medical scientists	555,556	501,526,532-550, 557-573	432	401-413,415-417,419-438
Physical scientists:				
Chemists	508,561	501-507,509-526,532-560,562-568	422,430	401-413,415-417,419-433, 438
Physicists and astronomers	560,564	508,509,535-541,543-546,550,557-559,561-563,565-568	424	401-413,415-417,419-433, 438
Other physical scientists	565,568	501-526,532-564,566,567	427	401-413,415-417,419-433, 438
Environmental scientists:				
Earth scientists	565,566,568	501-526,532-564,567	423	401-413,415-417,419-433, 438
Atmospheric scientists	563	501-526,532-562,564-568	425	401-413,415-417,419-433, 438
Oceanographers	567	501-526,532-566,568	426	401-413,415-417,419-433, 438
Psychologists	569-572	509,551,552,556-558,573,586	435	401-413,415-417,419-438
Social scientists:				
Economists	575-576,581	501,557-559,574, 557-580,582,583,589,595	434	434-437
Sociologists and anthropologists	573,586	569,572,574,577, 579,587,593	436	401-413,415-417,419-438
Other social scientists	574,577,581-584, 587,593	None	437	434-437

Source: Bureau of the Census

who had earned a bachelor's degree or higher in any field of science[9] and was employed as a college president, college dean, or administrator or manager of research or development, production or operations[10] and who regarded himself as having a coincident profession; or (9) whose highest degree[11] was in a related field of study and who was employed in a coincident occupation and who regarded himself professionally to be a college president, dean, or administrator or manager of research or development, production or operations.[12] The field "engineers" also includes any individual who failed to meet any of the above 9 criteria but who had completed a minimum of two years of a program of study leading to a bachelor's degree in engineering or a related field of study before 1968, and was employed as an engineer, and regarded himself professionally to be an engineer or a manager or administrator of research or development, production or operations; or who earned an associate degree before 1968, and was employed as an engineer, and regarded himself professionally to be an engineer or a manager or administrator of research or development, production, or operations.[13]

Some respondents to the 1974 survey reported "operations research analyst"[14] as their occupation or profession. The National Science Foundation determined that certain of the above criteria should classify these persons as either "mathematicians" or "engineers." Such an individual, therefore, is classified by criteria 3 or 7 as a "mathematician" if he, depending upon the criterion specified, was either employed as or regarded himself professionally as an "operations research analyst" and met the educational requirement of the specified criterion as it related to mathematicians. Likewise, the individual was classified by criteria 3, 4, or 7 as an "engineer" if, depending on the criterion specified, his occupation and/or profession was "operations research analyst" instead of "engineer," and he met all the other requirements of the specified criterion as these related to engineers. In addition, an individual is classified as an engineer if he met none of the above criteria, but had earned a bachelor's degree in a field of study other than one coincident to a field of science or engineering, was employed as a college president, dean, manager or administrator of research or development, production or operations,[15] and regarded himself professionally as an "operations research analyst."

[9] For all fields except economists, codes 501-587 and 593 of list A of appendix D for economists, codes 557, 558, 573-587, and 593 of list A of appendix D.
[10] Codes 457-459 of list C of appendix D.
[11] At the bachelor's level or higher.
[12] Codes 457-459 of list C of appendix D.
[13] Codes 458 and 459 of list C of appendix D.
[14] Code 421 of list C of appendix D.
[15] Codes 457-459 of list C of appendix D.

Weighting and Estimating Procedures

Estimation procedures—As mentioned earlier, the estimates for this report were prepared by a ratio estimation procedure, using the weights derived for the 1972 survey. Therefore, no adjustment was made for nonresponse in the 1974 survey. The weighting procedure for the 1972 survey involved first, the preparation of preliminary estimates by weighting the results for each sample person by the reciprocal of the probability of selection. As a second step, these weights were adjusted by applying a factor for each age, sex, and race cell within each of the sample's occupational categories from the 1970 census. Within each of the cells, the factor was computed as the ratio of the 1970 census count to the preliminary estimate. The final weight was the factor multiplied by the original weight of each person. To the extent the correlation between the data being tabulated and the estimated count of persons in the cells are positively correlated, the ratio estimation procedure will improve the reliability of the estimate.

Reliability of the estimates—The sample used for this survey is only one of a large number of possible samples that could have been selected using the same sample design, sample selection, and measurement procedures. Estimates derived from these samples would differ from each other. In addition, the estimates are subject to errors of response and of reporting, as occur in all survey work. The standard error of a survey estimate is primarily a measure of the variation among the estimates from all possible samples and is, therefore, a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. As calculated for this report, the standard error also partially measures the effect of certain nonsampling errors but does *not* measure any systematic biases in the data. The estimate and its associated standard error may be used to construct a confidence interval, that is, an interval having a prescribed probability that would include the average result of all possible samples. The chances are about two out of three (about 68 percent) that the survey estimate will differ from the average result of all possible samples by less than one standard error (plus or minus). Similarly, the chances are about 19 out of 20 that the difference would be less than twice the standard error and 99 out or 100 that it would be less than 2-½ times the standard error.

A number of approximations and generalizations have been used to produce standard errors, and hence the standard errors presented in the following tables should be regarded as approximations rather than precise measurements of the standard error in question.

There are two standard error tables shown for each group: A table for estimating standard errors of absolute numbers (total number of persons in a group, having a certain characteristic) and a table to obtain the standard errors of percentages.

The standard errors for estimating numbers or percents not shown in either set of tables may be approximated by linear interpolation. For example, of the 55,160 persons in the computer specialist field in 1974, 26.9 percent have the master's degree as the highest degree held in 1974. The standard error of this percent as computed from table A-3b is 1.1 percent. Based on these data, we may conclude that the expected proportion of computer specialists with the master's degree as the highest degree held in 1974 lies within the interval 24.7 percent to 29.1 percent with 95-percent confidence.

The figures in these tables are not directly applicable to standard errors of differences between two sample estimates. The standard error of the estimated difference between two figures may be approximated by the square root of the sum of the squares of the standard error of each estimate. This approximation will yield an exact result when the two characteristics are uncorrelated. If the two characteristics are positively correlated, the approximation will overestimate the standard error of the difference. For a difference between two sample estimates, one of which represents a subclass of the other, the table can be used with the difference considered as the sample estimate.

For example, of the 55,160 computer specialists in 1974, 4.7 percent have the Ph.D. as the highest degree held in 1974. The standard error of this percent as computed from table A-3b is 0.5 percent. The standard error of the difference between the above percentages (i.e., 26.9 - 4.7 = 22.2 percent) is then approximately

$(1.1)^2 + (0.5)^2 = 1.2$ percent

Based on these data, we may conclude with 95 percent confidence that the average estimate of the difference of the percentages derived from all possible samples lies within the interval 19.8 percent to 24.6 percent.

STANDARD ERRORS OF TOTALS AND PERCENTAGES FOR:

All Scientific and Technical Fields

Table A-2a.—Standard errors of totals

Size of estimate	Estimated standard error
1,000	190
5,000	430
10,000	610
20,000	850
50,000	1,320
100,000	1,830
150,000	2,180
300,000	2,810
500,000	3,120
800,000	2,770
1,080,000	2,650

Table A-2b.—Standard errors of percentages

Base of percent	Estimated percent						
	1 or 99	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
1,000	1.9	2.6	4.1	5.7	7.6	8.3	9.6
5,000	1.3	1.2	1.8	2.5	3.4	3.7	4.2
10,000	.8	.8	1.3	1.8	2.4	2.6	3.0
20,000	.6	.6	.9	1.2	1.7	1.8	2.1
50,000	.4	.3	.5	.8	1.0	1.1	1.3
100,000	.19	.26	.4	.5	.7	.8	.9
150,000	.15	.21	.3	.4	.6	.6	.7
300,000	.11	.15	.2	.3	.4	.4	.5
500,000	.08	.12	.18	.25	.3	.3	.4
800,000	.06	.09	.14	.20	.27	.29	.3
1,080,000	.05	.08	.12	.17	.23	.25	.2

Computer specialists, psychologists, physical scientists, and medical scientists

Table A-3a.—Standard errors of totals

Size of estimate	Estimated standard error
50	40
200	90
500	140
1,000	200
3,000	340
5,000	430
10,000	590
15,000	690
25,000	810
40,000	840
60,000	600
75,000	340
100,000	210
121,000	170

Table A-3b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	12.7	19.8	27.3	36.4	39.4	45.5
200	6.3	9.9	13.6	18.2	19.7	22.7
500	4.0	6.2	8.6	11.5	12.4	14.3
1,000	2.8	4.4	6.1	8.1	8.8	10.1
3,000	1.6	2.5	3.5	4.7	5.0	5.8
5,000	1.2	1.9	2.7	3.6	3.9	4.5
10,000	.9	1.4	1.9	2.5	2.7	3.2
15,000	.7	1.1	1.5	2.1	2.2	2.6
25,000	.5	.8	1.2	1.6	1.7	2.0
40,000	.4	.7	.9	1.2	1.3	1.6
60,000	.3	.5	.7	1.0	1.1	1.3
75,000	.3	.5	.7	.9	1.0	1.1
100,000	.2	.4	.6	.8	.8	1.0
121,000	.2	.4	.5	.7	.8	.9

Chemists

Table A-4a.—Standard errors of totals

Size of estimate	Estimated standard error
50	40
200	80
500	130
1,000	190
3,000	320
5,000	420
10,000	570
15,000	680
25,000	810
40,000	900
60,000	840
87,300	600

Table A-4b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	12.1	18.8	25.9	34.6	37.4	43.2
200	6.0	9.4	12.9	17.3	18.7	21.6
500	3.8	5.9	8.2	10.9	11.8	13.6
1,000	2.7	4.2	5.8	7.7	8.3	9.6
3,000	1.5	2.4	3.3	4.4	4.8	5.5
5,000	1.2	1.8	2.5	3.4	3.7	4.3
10,000	.8	1.3	1.8	2.4	2.6	3.0
15,000	.6	1.0	1.4	1.9	2.1	2.4
25,000	.5	.8	1.1	1.5	1.6	1.9
40,000	.4	.6	.9	1.2	1.3	1.5
60,000	.3	.5	.7	.9	1.0	1.2
87,300	.2	.4	.6	.8	.8	1.0

Physicists and astronomers

Table A-5a.—Standard errors of totals

Size of estimate	Estimated standard error
50	40
200	80
500	130
1,000	190
1,500	210
2,500	290
5,000	390
10,000	490
15,000	500
20,000	450
27,500	370

Table A-5b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	12.1	18.9	26.0	34.7	37.6	43.4
200	6.0	9.4	13.0	17.3	18.8	21.7
500	3.8	5.9	8.2	10.9	11.8	13.7
1,000	2.7	4.2	5.8	7.7	8.4	9.7
1,500	2.2	3.4	4.7	6.3	6.8	7.9
2,500	1.7	2.6	3.6	4.9	5.3	6.1
5,000	1.2	1.8	2.6	3.4	3.7	4.3
10,000	.8	1.3	1.8	2.4	2.6	3.0
15,000	.7	1.0	1.5	2.0	2.1	2.5
20,000	.6	.9	1.3	1.7	1.8	2.1
27,500	.5	.8	1.1	1.4	1.6	1.8

Mathematical scientists, mathematicians, and statisticians

Table A-6a.—Standard errors of totals

Size of estimate	Estimated standard error
50	30
200	70
500	110
1,000	160
3,000	270
5,000	340
10,000	440
15,000	500
25,000	500
40,000	370

Table A-6b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	10.2	15.9	21.9	29.2	31.6	36.5
200	5.1	7.9	10.9	14.6	15.8	18.2
500	3.2	5.0	6.9	9.2	10.0	11.5
1,000	2.2	3.5	4.9	6.5	7.0	8.1
3,000	1.3	2.0	2.8	3.7	4.0	4.7
5,000	1.0	1.5	2.1	2.9	3.1	3.6
10,000	.7	1.1	1.5	2.0	2.2	2.5
15,000	.5	.9	1.2	1.6	1.8	2.1
25,000	.4	.7	.9	1.3	1.4	1.6
40,000	.3	.5	.7	1.0	1.1	1.2

Environmental scientists, earth scientists, and biological scientists

Table A-7a.—Standard errors of totals

Size of estimate	Estimated standard error
50	40
200	80
500	130
1,000	190
1,500	230
2,500	300
5,000	400
10,000	520
15,000	580
20,000	590
30,000	440
36,000	360

Table A-7b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	12.3	19.1	26.4	35.2	38.1	44.0
200	6.1	9.5	13.2	17.6	19.0	22.0
500	3.8	6.0	8.3	11.1	12.0	13.9
1,000	2.7	4.2	5.9	7.8	8.5	9.8
1,500	2.2	3.5	4.8	6.4	6.9	8.0
2,500	1.7	2.7	3.7	4.9	5.3	6.2
5,000	1.2	1.9	2.6	3.5	3.8	4.4
10,000	.8	1.3	1.8	2.4	2.6	3.1
15,000	.7	1.1	1.5	2.0	2.2	2.5
20,000	.6	.9	1.3	1.7	1.9	2.2
30,000	.5	.7	1.0	1.4	1.5	1.7
36,000	.4	.7	.9	1.3	1.4	1.6

Oceanographers and other physical scientists

Table A-8a.—Standard errors of totals

Size of estimate	Estimated standard error
50	30
200	60
500	90
1,000	120
1,500	140
2,500	150
3,000	160
4,000	150
5,000	120
6,150	110

Table A-8b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	8.1	12.6	17.4	23.2	25.2	29.1
200	4.0	6.3	8.7	11.6	12.6	14.5
500	2.5	4.0	5.5	7.3	7.9	9.2
1,000	1.8	2.8	3.9	5.2	5.6	6.5
1,500	1.4	2.3	3.1	4.2	4.6	5.3
2,500	1.1	1.7	2.4	3.2	3.5	4.1
3,000	1.0	1.6	2.2	3.0	3.2	3.7
4,000	.9	1.4	1.9	2.6	2.8	3.2
5,000	.8	1.2	1.7	2.3	2.5	2.9
6,150	.7	1.1	1.5	2.1	2.2	2.6

Atmospheric scientists

Table A-9a.—Standard errors of totals

Size of estimate	Estimated standard error
50	30
200	80
500	115
1,000	150
1,500	160
2,000	150
2,500	140
3,000	100
3,350	80

Table A-9b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	11.0	17.2	23.7	31.6	34.2	39.5
200	5.5	8.6	11.8	15.8	17.1	19.7
500	3.5	5.4	7.5	10.0	10.8	12.5
1,000	2.4	3.8	5.3	7.0	7.6	8.8
1,500	2.0	3.1	4.3	5.7	6.2	7.2
2,000	1.7	2.7	3.7	5.0	5.4	6.2
2,500	1.5	2.4	3.3	4.4	4.8	5.5
3,000	1.4	2.2	3.0	4.0	4.4	5.1
3,350	1.3	2.1	2.8	3.8	4.1	4.8

Engineers

Table A-10a.—Standard errors of totals

Size of estimate	Estimated standard error
500	140
1,000	200
5,000	450
10,000	630
20,000	890
40,000	1,240
75,000	1,650
150,000	2,180
200,000	2,710
300,000	2,630
400,000	2,620
500,000	2,390
690,000	2,100

Table A-10b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
500	4.0	6.2	8.5	11.4	12.3	14.2
1,000	2.8	4.4	6.0	8.0	8.7	10.1
5,000	1.2	1.9	2.7	3.6	3.9	4.5
10,000	.8	1.3	1.9	2.5	2.7	3.1
20,000	.6	.9	1.3	1.8	1.9	2.2
40,000	.4	.6	.9	1.2	1.3	1.5
75,000	.3	.5	.7	.9	1.0	1.1
150,000	.2	.3	.4	.6	.7	.8
200,000	.2	.3	.4	.5	.6	.7
300,000	.1	.2	.3	.4	.5	.5
400,000	.1	.2	.3	.4	.4	.5
500,000	.1	.1	.2	.3	.3	.4
690,000	.1	.1	.2	.3	.3	.3

Life scientists and agricultural scientists

Table A-11a.—Standard errors of totals

Size of estimate	Estimated standard error
50	40
200	90
500	140
1,000	210
3,000	350
5,000	450
10,000	621
15,000	605
25,000	863
40,000	915
60,000	739
75,500	640

Table A-11b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	13.2	20.5	28.3	37.7	40.8	47.2
200	6.6	10.2	14.1	16.8	20.4	23.6
500	4.1	6.5	8.9	9.1	12.9	14.9
1,000	2.9	4.6	6.3	8.4	9.1	10.5
3,000	1.7	2.6	3.6	4.8	5.2	6.0
5,000	1.3	2.0	2.8	3.7	4.0	4.7
10,000	.9	1.4	2.0	2.6	2.8	3.3
15,000	.7	1.1	1.6	2.1	2.3	2.7
25,000	.5	.9	1.2	1.6	1.8	2.1
40,000	.4	.7	1.0	1.3	1.8	1.6
60,000	.3	.5	.8	1.0	1.1	1.3
75,500	.3	.5	.7	.9	1.0	1.2

Social scientists, sociologists, anthropologists, and other social scientists

Table A-12a.—Standard errors of totals

Size of estimate	Estimated standard error
50	30
200	100
500	160
1,000	230
3,000	410
5,000	510
10,000	700
15,000	830
25,000	990
40,000	1,080
60,000	970
82,800	710

Table A-12b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	14.9	23.1	31.9	42.5	46.0	53.2
200	7.4	11.5	15.9	21.2	23.0	26.6
500	4.7	7.3	10.0	13.4	14.5	16.8
1,000	3.3	5.1	7.1	9.5	10.3	11.9
3,000	1.9	2.9	4.1	5.4	5.9	6.8
5,000	1.4	2.3	3.1	4.2	4.6	5.3
10,000	1.0	1.6	2.2	3.0	3.2	3.7
15,000	.8	1.3	1.8	2.4	2.6	3.0
25,000	.6	1.0	1.4	1.9	2.0	2.3
40,000	.5	.8	1.1	1.5	1.6	1.8
60,000	.4	.6	.9	1.2	1.3	1.5
82,800	.3	.5	.7	1.0	1.1	1.3

Economists

Table A-13a.—Standard errors of totals

Size of estimate	Estimated standard error
50	40
200	80
500	130
1,000	190
2,500	270
4,000	330
6,000	380
8,000	410
10,000	420
13,000	400
16,000	330
19,800	240

Table A-13b.—Standard errors of percentages

Base of percent	Estimated percent					
	2 or 98	5 or 95	10 or 90	20 or 80	25 or 75	50
50	11.8	18.3	25.2	33.7	36.5	42.1
200	5.9	9.1	12.6	16.8	18.2	21.0
500	3.7	5.8	7.9	10.6	11.5	13.3
1,000	2.6	4.1	5.6	7.5	8.1	9.4
2,500	1.6	2.5	3.5	4.7	5.1	5.9
4,000	1.3	2.0	2.8	3.7	4.0	4.7
6,000	1.0	1.6	2.3	3.0	3.3	3.8
8,000	.9	1.4	1.9	2.6	2.8	3.3
10,000	.8	1.2	1.7	2.3	2.5	2.9
13,000	.7	1.1	1.5	2.0	2.2	2.6
16,000	.6	1.0	1.4	1.8	2.0	2.3
19,800	.5	.9	1.2	1.6	1.8	2.1

Sample Selection Process for the 1974 Survey

The 156,116 sample cases for the 1972 Professional, Technical, and Scientific Manpower Survey were separated into two segments. The "target" segment consisted of 150,358 persons who were recorded by the 1970 Census of Population as being in one of the 40 groups of scientific, engineering, or related occupations in the 1970 experienced civilian labor force. The "residual" segment consisted of 5,758 persons who were recorded by the 1970 census as having four or more years of college and as being in the 1970 experienced civilian labor force in occupations other than the 40 target occupational groups.

The sample selection for the 1974 survey focused exclusively on the "target" segment. From this "target" segment, 115,557 persons responded in the 1972 survey. Based on criteria established by the National Science Foundation, these respondents were classified as "in-scope"; that is, in one of 8 major fields of science or engineering in 1972, or as "out-of-scope"; this is, outside a field of science or engineering in 1972. The in-scope cases, numbering 50,093 persons, became the sample for the 1974 survey.

Table A-14 presents a distribution of the 1972 respondents from the 40 groups of census occupations in the "target" segment according to their field of science or engineering in 1972.

Table A-14.—Field of science or engineering in 1972, by 1970 Census occupation

	1970 census occupation[1]	Total	Computer specialists	Engineers	Field of science or engineering in 1972										
					Mathematical specialists			Life scientists				Physical scientists			
					Total	Mathematicians	Statisticians	Total	Agricultural scientists	Biological scientists	Medical scientists	Total	Chemists	Physicists and astronomers	Other physical scientists
1	Total target occupations	115,557	3,391	25,797	2,185	1,604	581	4,891	2,025	2,139	727	6,248	3,644	2,128	476
2	Operations and computer specialists	14,820	2,809	780	189	163	26	32	9	17	6	61	18	35	8
3	Computer programmers	4,515	732	101	67	61	6	8	2	5	1	15	3	9	3
4	Computer systems analysts	4,596	1,453	185	59	50	9	11	4	5	2	18	4	11	3
5	Computer specialists, n.e.c.	991	215	116	17	16	1	3	1	1	1	7	1	6	—
6	Operations and systems analysts	4,718	409	378	46	36	10	10	2	6	2	21	10	9	2
7	Engineers	39,572	202	22,036	89	72	17	67	29	31	7	410	270	126	14
8	Aeronautical and astronautical engineers	4,715	23	2,985	23	21	2	6	2	3	1	46	12	31	3
9	Chemical engineers	4,308	14	3,233	5	5	—	9	2	6	1	192	173	16	3
10	Civil engineers	4,872	7	2,905	4	3	1	8	6	1	1	2	2	—	—
11	Electrical and electronic engineers	5,429	68	3,301	11	10	1	2	1	—	1	36	7	27	2
12	Industrial engineers	4,767	23	1,634	23	12	11	14	5	8	1	37	27	8	2
13	Mechanical engineers	4,761	13	2,824	5	5	—	3	1	2	—	6	—	6	—
14	Metallurgical and materials engineers	1,231	1	824	—	—	—	7	3	3	1	18	14	4	—
15	Mining and petroleum engineers	1,193	—	803	—	—	—	3	1	1	1	6	3	3	—
16	Sales engineers	4,060	14	1,328	1	1	—	3	1	2	—	12	7	4	1
17	Engineers, n.e.c., and engineering teachers	4,236	39	2,199	17	15	2	12	7	5	—	55	25	27	3
18	Mathematical specialists	4,579	155	139	1,679	1,218	461	22	4	12	6	50	21	25	4
19	Actuaries and statisticians	2,052	16	62	405	34	371	13	4	6	3	14	9	3	2
20	Mathematicians	2,527	139	77	1,274	1,184	90	9	—	6	3	36	12	22	2
21	Life scientists	6,611	4	71	6	1	5	3,713	1,718	1,683	312	291	91	7	193
22	Agricultural scientists	1,358	—	33	3	—	3	606	517	86	3	43	7	—	36
23	Foresters and conservationists[2]	1,369	1	17	—	—	—	1,037	1,018	17	2	14	2	—	12
24	Biological scientists	3,884	3	21	3	1	2	2,070	183	1,580	307	234	82	7	145
25	Physical scientists	10,560	37	803	37	34	3	203	40	98	65	4,634	2,707	1,753	174
26	Chemists	4,883	9	334	7	5	2	138	28	67	43	2,692	2,641	13	38
27	Physicists[3]	2,888	18	323	15	15	—	38	2	15	21	1,822	37	1,709	76
28	Other physical scientists	2,789	10	146	15	14	1	27	10	16	1	120	29	31	60
29	Social scientists	10,116	67	217	60	27	33	73	21	24	28	54	29	9	16
30	Economists	4,564	63	170	44	15	29	30	19	7	4	23	18	3	2
31	Psychologists	3,030	2	5	3	1	2	23	—	6	17	7	2	—	5
32	Other social scientists	2,522	2	42	13	11	2	20	2	11	7	24	9	6	9
33	Engineering and science technicians	11,956	23	506	11	8	3	91	34	41	16	211	188	13	10
34	Agricultural, biological, and chemical technicians, excl. health technicians	2,105	2	34	2	2	—	50	19	23	8	158	150	2	6
35	Draftsmen	2,434	—	126	—	—	—	2	2	—	—	2	—	—	2
36	Electrical and electronic engineering technicians	2,025	8	79	2	1	1	2	—	1	1	5	4	1	—
37	Industrial and mechanical engineering technicians, and numerical control tool programmers	1,327	8	99	5	3	2	—	—	—	—	6	5	1	—
38	Surveyors	2,010	—	73	1	1	—	10	9	1	—	1	1	—	—
39	Mathematical technicians and engineering and science technicians, n.e.c.	2,055	5	95	1	1	—	27	4	16	7	39	28	9	2
40	Personnel and labor relations workers	2,506	5	50	7	6	1	14	7	4	3	12	8	3	1
41	Health specialties teachers	1,055	—	5	—	—	—	220	5	22	193	19	9	3	7
42	Trade, industrial, and technical teachers	122	1	1	—	—	—	2	—	—	2	—	—	—	—
43	Miscellaneous teachers	659	1	18	3	3	—	6	1	2	3	8	2	—	6
44	Teachers, subject n.s.t specified	2,018	7	125	33	27	6	123	24	78	21	98	47	42	9
45	Technicians, n.e.c.	1,234	3	17	1	1	—	5	2	2	1	8	6	2	—
46	Research workers, not specified	1,984	14	233	33	18	15	178	55	80	43	259	158	77	24
47	School administrators, college[4]	1,138	4	28	4	3	1	36	10	20	6	16	9	4	3
48	Managers and administrators, n.e.c.[4]	6,627	59	768	33	23	10	106	66	25	15	117	81	29	7

See footnote at end of table.

Table A-14.—Field of science or engineering in 1972, by 1970 Census occupation—Continued

	1970 census occupation[1]	Field of science or engineering in 1972									Not in a field of science or engineering in 1972
		Environmental scientists				Psychologists	Social scientists				
		Total	Atmospheric scientists	Earth scientists	Oceanographers		Total	Economists	Sociologists and anthropologists	Other social scientists	
1	Total target occupations	2,095	150	1,898	47	2,488	2,998	1,216	696	1,086	65,464
2	Operations and computer specialists	19	2	17	—	22	106	50	12	44	10,802
3	Computer programmers	6	1	5	—	9	5	4	—	1	3,572
4	Computer systems analysts	5	1	4	—	6	34	18	4	12	2,825
5	Computer specialists, n.e.c.	5	—	5	—	—	4	1	1	2	624
6	Operations and systems analysts	3	—	3	—	7	63	27	7	29	3,781
7	Engineers	71	6	65	—	21	69	31	8	30	16,607
8	Aeronautical and astronomical engineers	4	1	3	—	3	10	3	—	7	1,615
9	Chemical engineers	4	2	2	—	2	3	2	1	—	846
10	Civil engineers	14	—	14	—	1	6	2	—	4	1,925
11	Electrical and electronic engineers	2	1	1	—	—	4	2	—	2	2,005
12	Industrial engineers	4	2	2	—	7	27	15	2	10	2,998
13	Mechanical engineers	1	—	1	—	1	3	1	1	1	1,905
14	Metallurgical and materials engineers	1	—	1	—	1	1	—	—	1	378
15	Mining and petroleum engineers	33	—	33	—	—	1	—	1	—	347
16	Sales engineers	2	—	2	—	2	5	2	1	2	2,693
17	Engineers, n.e.c., and engineering teachers	6	—	6	—	4	9	4	2	3	1,895
18	Mathematical specialists	8	—	8	—	25	75	36	10	29	2,426
19	Actuaries and statisticians	1	—	1	—	15	56	27	7	22	1,470
20	Mathematicians	7	—	7	—	10	19	9	3	7	956
21	Life scientists	53	5	44	4	48	46	19	10	17	2,379
22	Agricultural scientists	12	2	10	—	—	25	16	2	7	636
23	Foresters and conservationists[2]	9	—	8	1	—	3	1	—	2	288
24	Biological scientists	32	3	26	3	48	18	2	8	8	1,455
25	Physical scientists	1,815	123	1,660	32	8	25	5	8	12	2,998
26	Chemists	13	1	11	1	2	8	2	4	2	1,680
27	Physicists	27	2	23	2	6	8	2	4	2	631
28	Other physical scientists	1,775	120	1,626	29	—	9	1	—	8	687
29	Social scientists	10	—	10	—	2,108	2,111	924	541	646	5,416
30	Economists	3	—	3	—	10	992	917	5	70	3,229
31	Psychologists	—	—	—	—	2,082	117	—	17	100	791
32	Other social scientists	7	—	7	—	16	1,002	7	519	476	1,396
33	Engineering and science technicians	15	1	14	—	5	11	2	5	4	11,083
34	Agricultural, biological, and chemical technicians, excl. health technicians	3	—	3	—	—	2	—	1	1	1,854
35	Draftsmen	3	—	3	—	2	—	—	—	—	2,299
36	Electrical and electronic engineering technicians	1	1	—	—	—	2	1	1	—	1,926
37	Industrial and mechanical engineering technicians, and numerical control tool programmers	—	—	—	—	—	2	1	—	1	1,207
38	Surveyors	—	—	—	—	—	2	—	1	1	1,923
39	Mathematical technicians and engineering and science technicians, n.e.c.	8	—	8	—	3	3	—	2	1	1,874
40	Personnel and labor relations workers	1	—	1	—	20	53	9	4	40	2,344
41	Health specialties teachers	1	—	1	—	28	11	1	2	8	771
42	Trade, industrial, and technical teachers	—	—	—	—	1	1	—	—	1	116
43	Miscellaneous teachers	13	2	11	—	1	49	1	2	46	560
44	Teachers, subject not specified	25	—	23	2	61	127	32	46	49	1,419
45	Technicians, n.e.c.	2	1	1	—	1	3	—	1	2	1,194
46	Research workers, not specified	37	7	21	9	68	111	27	25	59	1,051
47	School administrators, college[2]	5	—	5	—	35	53	17	6	30	957
48	Managers and administrators, n.e.c.[2]	20	3	17	—	36	147	62	16	69	5,341

[1] For detailed information on the composition of the census occupational categories, see U.S. Bureau of the Census, **Characteristics of Persons in Engineering and Scientific Occupations: 1972,** Technical Paper No. 33, 1974, appendix A (especially list A, page 120) for categories with line numbers 33-48, and appendix E for categories with line numbers 2-32.

[2] Excludes persons with fewer than four years of college.

NOTE: — Represents zero; n.e.c. Not elsewhere classified.

SOURCE: Bureau of the Census.

Analysis of Response

Table A-15 presents response rates of various components of the sample for the 1974 National Survey of Scientists and Engineers. The characteristics presented here are based on the 1970 census or on the 1974 survey. Since the percentages in the table are based on a complete count of the sample cases, no reference to the standard error tables is necessary.

Men were more likely than women to respond in the 1974 survey. About 88 percent of the men in the survey panel responded, compared with about 85 percent of the women.

Response rates increased steadily by age from a rate of nearly 76 percent for panel members under 25-years old to almost 92 percent for the age group 55 to 59-years old. After peaking for the 55 to 59 years of age group, however, the response rate made slight declines in the groups above 60, dropping to around 90 percent for persons 65 years and over. Since nonrespondents include deceased persons, this slight decrease in rates is expected. Overall, except for the two youngest age groups, over 85 percent of each age category responded in the 1974 survey; even the youngest groups, however, had rates above 75 percent.

There were only slight differences in response rates for 1974 among the various fields of science or engineering in 1972. The highest response rate, 91 percent, was that for environmental scientists, one of the oldest groups on the average. The lowest response rate was approximately 86 percent for computer specialists, social scientists, and psychologists.

Table A-15.—Percent distribution—analysis of response in the 1974 National Survey of Scientists and Engineers, by field of science or engineering in 1972, age in 1974, and sex

Sex, age in 1974, and field of science or engineering in 1972	Total number	Percent distribution		
		Total	Respondents	Nonrespondents
Total	50,093	100.0	88.2	11.8
SEX				
Male	46,877	100.0	88.3	11.7
Female	3,216	100.0	85.4	14.6
AGE IN 1974				
Under 25 years	9	100.0	75.8	24.2
25 to 29 years	4,730	100.0	83.9	16.1
30 to 34 years	9,174	100.0	85.6	14.4
35 to 39 years	8,312	100.0	87.1	12.9
40 to 44 years	7,797	100.0	88.8	11.2
45 to 49 years	7,057	100.0	89.7	10.3
50 to 54 years	5,646	100.0	91.3	8.7
55 to 59 years	3,495	100.0	91.6	8.4
60 to 64 years	2,161	100.0	91.1	8.9
65 years and over	1,622	100.0	89.5	10.5
FIELD OF SCIENCE OR ENGINEERING IN 1972				
Computer specialists	3,391	100.0	85.6	14.4
Engineers	25,797	100.0	88.1	11.9
Mathematical scientists	2,185	100.0	88.4	11.6
Life scientists	4,891	100.0	89.7	10.3
Physical scientists	6,248	100.0	89.9	10.1
Environmental scientists	2,095	100.0	90.7	9.3
Psychologists	2,488	100.0	86.1	13.9
Social scientists	2,999	100.0	85.5	14.5

SOURCE: Bureau of the Census.

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APPENDIX B

Detailed Statistical Tables

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Table B1. Number of scientists and engineers by State*: 1974

States	Total	Scientists	Engineers
United States, Total	1,079,698	391,787	687,911
Alabama	14,253	3,664	10,589
Alaska	1,806	819	987
Arizona	10,593	3,950	6,643
Arkansas	3,879	1,760	2,119
California	142,599	43,236	99,363
Colorado	18,124	7,368	10,756
Connecticut	23,717	7,074	16,643
Delaware	5,797	2,678	3,119
Dist. of Columbia	20,619	12,738	7,881
Florida	25,975	7,809	18,166
Georgia	14,437	5,816	8,621
Hawaii	4,316	1,935	2,381
Idaho	3,048	1,391	1,657
Illinois	52,457	19,467	32,990
Indiana	20,006	7,113	12,893
Iowa	8,509	4,159	4,350
Kansas	8,095	3,335	4,760
Kentucky	7,984	3,073	4,911
Louisiana	14,856	5,238	9,618
Maine	2,743	1,039	1,704
Maryland	30,921	14,100	16,821
Massachusetts	42,186	13,697	28,489
Michigan	43,253	14,241	29,012
Minnesota	21,148	7,371	13,777
Mississippi	6,679	2,688	3,991
Missouri	19,373	6,709	12,664
Montana	2,826	1,701	1,125
Nebraska	4,529	1,862	2,667
Nevada	1,549	634	915
New Hampshire	3,148	1,127	2,021
New Jersey	48,327	18,284	30,043
New Mexico	8,143	3,394	4,749
New York	94,108	38,006	56,102
North Carolina	15,842	7,368	8,474
North Dakota	1,960	960	1,000
Ohio	56,053	16,078	39,975
Oklahoma	11,085	4,311	6,774
Oregon	10,093	4,991	5,102
Pennsylvania	64,399	20,335	44,064
Rhode Island	4,435	2,040	2,395
South Carolina	8,460	2,829	5,631
South Dakota	1,582	860	722
Tennessee	15,194	5,601	9,593
Texas	59,506	20,249	39,257
Utah	6,626	2,385	4,241
Vermont	2,144	713	1,431
Virginia	25,245	9,881	15,364
Washington	24,767	6,736	18,031
West Virginia	5,825	2,140	3,685
Wisconsin	17,657	7,494	10,163
Wyoming	2,538	1,390	1,148
Other†	16,284	7,950	8,334

*State of employment or State of residence if not employed.
†Includes outlying areas of the United States, foreign, and State not reported.
SOURCE: National Science Foundation, National Sample, 1974.

Table B-2. Number of employed scientists and engineers by State*: 1974

States	Total	Scientists	Engineers
United States, Total	1,013,086	365,520	647,566
Alabama	13,547	3,390	10,157
Alaska	1,757	785	972
Arizona	9,454	3,544	5,910
Arkansas	3,656	1,648	2,008
California	133,393	40,600	92,793
Colorado	17,133	6,878	10,255
Connecticut	22,383	6,682	15,701
Delaware	5,425	2,463	2,962
Dist. of Columbia	20,152	12,466	7,686
Florida	23,105	7,060	16,045
Georgia	13,509	5,317	8,192
Hawaii	4,074	1,840	2,234
Idaho	2,858	1,303	1,555
Illinois	49,557	18,022	31,535
Indiana	18,864	6,542	12,322
Iowa	8,109	3,982	4,127
Kansas	7,565	3,075	4,490
Kentucky	7,530	2,966	4,564
Louisiana	14,006	5,035	8,971
Maine	2,356	917	1,439
Maryland	28,921	13,100	15,821
Massachusetts	39,642	12,730	26,912
Michigan	40,250	13,251	26,999
Minnesota	19,836	6,573	13,263
Mississippi	6,027	2,419	3,608
Missouri	18,376	6,276	12,100
Montana	2,599	1,498	1,101
Nebraska	4,409	1,790	2,619
Nevada	1,438	610	828
New Hampshire	2,980	983	1,997
New Jersey	44,745	16,579	28,166
New Mexico	7,389	3,168	4,221
New York	88,735	35,690	53,045
North Carolina	14,807	6,678	8,129
North Dakota	1,833	914	919
Ohio	53,491	15,359	38,132
Oklahoma	10,289	4,052	6,237
Oregon	9,576	4,882	4,694
Pennsylvania	60,715	18,984	41,731
Rhode Island	4,183	1,914	2,269
South Carolina	7,869	2,507	5,362
South Dakota	1,540	829	711
Tennessee	14,751	5,404	9,347
Texas	56,471	18,965	37,506
Utah	6,240	2,242	3,998
Vermont	1,987	607	1,380
Virginia	22,784	8,729	14,055
Washington	23,007	6,425	16,582
West Virginia	5,316	1,984	3,332
Wisconsin	16,250	6,901	9,349
Wyoming	2,420	1,392	1,028
Other†	15,777	7,570	8,207

*State of employment.
†Includes outlying areas of the United States, foreign, and State not reported.
SOURCE: National Science Foundation, National Sample, 1974.

Table B-3. Number of employed scientists and engineers receiving Federal support, by State* and agency of support: 1974

State	Total	Federal Agency of Support												No Federal support	Support status unknown	No report of support status
		Total	DOD	NASA	HEW	DOT	AEC†	USDA	NSF	Interior	EPA	HUD	Other agencies			
United States, total	1,013,086	375,633	170,733	51,320	35,553	34,886	28,048	26,152	21,005	16,246	15,910	12,532	51,171	573,614	30,605	33,234
Alabama	13,547	7,375	2,954	2,761	305	269	12	590	12	162	180	260	790	5,314	272	586
Alaska	1,757	1,250	342	131	11	334	12	156	165	118	14	(s)	170	452	(s)	55
Arizona	9,454	3,885	2,110	857	263	140	94	516	430	306	315	(s)	213	5,047	350	172
Arkansas	3,656	1,250	236	(s)	116	144	(s)	353	12	61	76	112	484	2,183	161	62
California	133,393	66,666	38,943	15,050	4,572	5,294	6,355	1,788	3,278	1,577	2,002	1,554	5,178	58,092	4,485	4,150
Colorado	17,133	7,811	1,900	1,695	353	674	437	600	486	2,139	200	49	1,248	8,618	254	450
Connecticut	22,383	7,950	5,330	2,095	560	606	530	131	326	65	225	170	820	13,090	923	420
Delaware	5,425	379	147	107	26	44	77	12	21	(s)	(s)	(s)	52	4,824	122	100
District of Columbia	20,152	15,593	5,969	673	1,273	1,197	352	1,003	531	564	558	334	4,954	3,317	141	1,101
Florida	23,105	10,499	5,479	2,580	528	430	329	477	598	389	231	254	983	11,368	561	677
Georgia	13,509	5,067	2,042	237	789	702	170	825	394	230	294	208	477	7,625	223	594
Hawaii	4,074	1,548	778	11	44	188	110	125	134	37	56	85	239	2,389	64	73
Idaho	2,858	1,965	147	19	25	208	855	577	(s)	193	36	53	186	716	109	68
Illinois	49,557	10,673	2,658	316	1,642	2,053	1,904	839	1,166	276	592	597	1,371	35,509	1,951	1,424
Indiana	18,864	4,221	1,872	86	425	295	108	358	647	72	239	188	542	13,573	704	366
Iowa	8,109	2,679	702	235	213	203	175	656	286	182	229	106	280	4,856	272	302
Kansas	7,565	2,702	1,017	171	551	486	133	333	245	79	247	49	502	4,281	371	211
Kentucky	7,530	2,112	364	91	168	272	143	442	72	214	327	307	321	4,683	375	360
Louisiana	14,006	3,179	595	395	368	373	(s)	909	109	148	263	175	492	9,947	297	583
Maine	2,356	844	208	13	25	143	(s)	285	(s)	93	35	11	79	1,357	12	143
Maryland	28,921	20,212	10,419	3,201	2,645	899	940	916	327	189	526	419	3,760	7,288	578	843
Massachusetts	39,642	16,283	9,041	2,064	1,797	2,215	321	194	1,581	238	810	802	1,837	21,179	922	1,258
Michigan	40,250	7,130	1,891	212	1,411	1,139	216	682	676	298	412	421	1,196	31,270	842	1,008
Minnesota	19,836	4,875	2,078	510	647	448	88	574	470	167	301	249	922	13,337	870	754
Mississippi	6,027	3,193	1,320	299	202	132	37	759	100	130	99	12	439	2,480	108	246
Missouri	18,376	7,347	3,952	499	873	646	345	554	244	75	539	340	796	9,843	597	589
Montana	2,599	1,491	24	24	57	44	(s)	700	122	472	26	(s)	214	996	13	99
Nebraska	4,409	1,465	497	36	141	236	(s)	482	(s)	71	35	49	111	2,755	126	63
Nevada	1,438	893	36	12	13	86	405	75	(s)	182	49	13	108	532	13	(s)
New Hampshire	2,980	1,037	360	12	128	152	12	112	46	101	63	87	103	1,870	13	60

Table B-3. Number of employed scientists and engineers receiving Federal support, by State* and agency of support: 1974 (con.)

State	Total	Federal Agency of Support												No Federal support	Support status unknown	No report of support status
		Total	DOD	NASA	HEW	DOT	AEC†	USDA	NSF	Interior	EPA	HUD	Other agencies			
New Jersey	44,745	11,108	7,097	1,341	812	943	318	104	467	384	435	526	1,283	30,592	1,621	1,424
New Mexico	7,389	5,540	2,202	152	450	153	3,149	219	175	167	49	123	224	1,529	23	297
New York	88,735	26,699	12,605	2,784	3,563	2,631	1,792	443	1,644	531	1,097	1,329	4,769	55,670	3,834	2,532
North Carolina	14,807	3,470	902	37	687	503	78	550	264	95	476	94	314	10,336	510	491
North Dakota	1,833	1,354	190	(‡)	20	350	(‡)	262	36	293	40	123	251	479	(‡)	(‡)
Ohio	53,491	14,558	7,951	2,365	1,418	1,340	838	504	637	394	944	555	1,441	36,311	1,355	1,267
Oklahoma	10,289	2,003	493	119	244	370	37	330	104	204	151	159	139	7,505	330	451
Oregon	9,576	3,797	306	(‡)	463	253	(‡)	1,102	157	978	167	65	689	5,237	308	234
Pennsylvania	60,715	16,809	7,346	1,683	2,378	1,795	1,842	697	861	751	813	798	2,450	39,932	2,043	1,931
Rhode Island	4,183	2,048	886	(‡)	206	289	(‡)	101	86	13	214	173	542	1,929	82	124
South Carolina	7,869	2,401	639	80	110	126	674	438	70	208	84	106	214	5,147	210	111
South Dakota	1,540	877	78	77	35	106	(‡)	378	114	138	13	(‡)	130	568	(‡)	95
Tennessee	14,751	6,306	1,491	289	389	297	2,172	310	195	109	194	242	1,670	7,435	588	422
Texas	56,471	16,961	7,680	3,783	967	1,734	282	1,126	810	417	679	346	1,992	36,101	1,872	1,537
Utah	6,240	3,269	1,191	246	244	286	160	458	430	526	136	37	313	2,623	108	240
Vermont	1,987	589	269	43	50	56	(‡)	119	11	11	24	(‡)	86	1,354	14	30
Virginia	22,784	13,013	7,453	1,979	1,170	889	391	680	712	750	556	212	2,094	8,732	413	626
Washington	23,007	13,316	6,609	1,481	708	1,731	1,879	891	639	587	362	235	1,217	8,337	648	706
West Virginia	5,316	1,201	169	(‡)	229	287	(‡)	289	62	75	12	15	158	3,818	169	128
Wisconsin	16,250	4,083	363	127	878	472	117	698	505	204	310	316	997	10,987	519	661
Wyoming	2,420	1,120	84	139	163	42	36	245	37	474	72	(‡)	347	1,217	24	59
Others	15,777	3,537	1,318	203	198	181	123	185	511	109	103	174	984	8,984	205	3,051

*State of employment.
†Atomic Energy Commission before reorganization into Energy Research and Development Agency and Nuclear Regulatory Commission.
‡No cases reported.
§Includes outlying areas of the United States, foreign, and State not reported.
Note: The sum of the sources of Federal support may exceed the total receiving support since support may have been received from more than one source.
SOURCE: National Science Foundation, National Sample, 1974.

Table B-4. Number of scientists and engineers by Standa

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema- ticians	Statis- ticians		Total	Earth scientists	Atmospheric scientists	Oceanog- raphers
All areas, total	1,079,698	121,011	87,334	27,519	6,158	27,833	20,076	7,757	55,186	29,466	24,589	3,314	1,563
SMSA, total	872,375	96,901	69,903	21,927	5,071	21,081	14,546	6,535	48,749	22,623	18,673	2,643	1,307
Abilene, Tex.	310	(*)	(*)	(*)	(*)	(*)	(*)	(*)	12	12	12	(*)	(*)
Akron, Ohio	5,301	1,050	914	111	25	91	73	18	183	(*)	(*)	(*)	(*)
Albany, Ga.	246	(*)	(*)	(*)	(*)	12	12	(*)	17	(*)	(*)	(*)	(*)
Albany-Schenectady-Troy, N.Y.	7,307	1,237	986	227	24	110	92	18	166	63	39	24	(*)
Albuquerque, N.M.	3,780	491	186	235	70	109	96	13	148	144	120	24	(*)
Allentown-Bethlehem-Easton, Pa.-N.J.	3,281	217	154	47	16	63	63	(*)	106	38	38	(*)	(*)
Altoona, Pa.	268	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	25	25	(*)	(*)
Amarillo, Tex.	685	80	80	(*)	(*)	12	12	(*)	(*)	61	61	(*)	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	13,052	1,030	813	204	13	236	167	69	587	264	235	29	(*)
Anderson, Ind.	638	74	74	(*)	(*)	(*)	(*)	(*)	15	(*)	(*)	(*)	(*)
Ann Arbor, Mich.	4,371	497	218	254	25	74	46	28	209	150	139	11	(*)
Asheville, N.C.	421	160	160	(*)	(*)	(*)	(*)	(*)	(*)	38	(*)	38	(*)
Atlanta, Ga.	7,868	649	473	164	12	252	214	38	805	70	44	26	(*)
Atlantic City, N.J.	475	30	30	(*)	(*)	26	26	(*)	16	12	(*)	12	(*)
Augusta, Ga.-S.C.	1,431	296	248	36	12	31	31	(*)	30	63	51	12	(*)
Austin, Tex.	2,769	324	119	178	27	88	76	12	219	151	151	(*)	(*)
Bakersfield, Calif.	2,162	284	120	139	25	23	23	(*)	60	112	100	12	(*)
Baltimore, Md.	11,415	1,231	940	169	122	640	612	28	853	73	37	(*)	36
Baton Rouge, La.	3,230	302	279	23	(*)	77	77	(*)	96	95	82	(*)	13
Bay City, Mich.	275	(*)	(*)	(*)	(*)	13	13	(*)	(*)	(*)	(*)	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	2,001	236	236	(*)	(*)	64	64	(*)	(*)	26	26	(*)	(*)
Billings, Mont.	586	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	97	85	12	(*)
Biloxi-Gulfport, Miss.	267	35	35	(*)	(*)	(*)	(*)	(*)	11	(*)	(*)	(*)	(*)
Binghamton, N.Y.-Pa.	2,978	173	161	12	(*)	36	36	(*)	332	17	17	(*)	(*)
Birmingham, Ala.	2,864	85	61	24	(*)	35	24	11	87	25	13	12	(*)
Bloomington-Normal, Ill.	406	25	25	(*)	(*)	50	50	(*)	17	(*)	(*)	(*)	(*)
Boise City, Idaho	763	11	11	(*)	(*)	54	15	39	19	101	76	25	(*)
Boston, Mass.	30,156	4,038	2,053	1,635	350	492	356	136	1,816	434	267	154	13
Bridgeport, Conn.	2,367	262	262	(*)	(*)	15	(*)	15	140	(*)	(*)	(*)	(*)
Brockton, Mass.	582	144	72	58	14	13	13	(*)	18	(*)	(*)	(*)	(*)
Brownsville-Harlingen-San Benito, Tex.	121	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Buffalo, N.Y.	7,309	995	877	55	63	131	76	55	153	12	12	(*)	(*)
Canton, Ohio	1,327	110	98	12	(*)	18	(*)	18	(*)	12	12	(*)	(*)
Cedar Rapids, Iowa	1,497	36	24	12	(*)	(*)	(*)	(*)	17	(*)	(*)	(*)	(*)
Champaign-Urbana, Ill.	2,469	527	355	160	12	93	80	13	74	87	50	37	(*)

Metropolitan Statistical Area (SMSA) and field: 1974

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
687,911	75,462	35,935	28,790	10,737	34,889	47,940	19,754	11,158	17,028	All areas, total
573,010	44,520	23,800	11,655	9,065	28,076	37,415	16,210	8,268	12,937	SMSA, total
148	84	84	(*)	(*)	41	13	(*)	13	(*)	Abilene, Tex.
3,446	98	76	22	(*)	124	309	(*)	200	109	Akron, Ohio
205	12	(*)	12	(*)	(*)	(*)	(*)	(*)	(*)	Albany, Ga.
4,872	266	153	14	99	271	322	115	85	122	Albany-Schenectady-Troy, N.Y.
2,438	204	81	111	12	38	208	50	77	81	Albuquerque, N.M.
2,643	23	12	11	(*)	80	111	37	44	30	Allentown-Bethlehem-Easton, Pa.-N.J.
152	38	25	13	(*)	40	13	13	(*)	(*)	Altoona, Pa.
442	77	35	42	(*)	13	(*)	(*)	(*)	(*)	Amarillo, Tex.
9,892	289	217	23	49	496	258	17	107	134	Anaheim-Santa Ana-Garden Grove, Calif.
536	13	13	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Anderson, Ind.
2,293	466	307	(*)	159	344	338	48	77	213	Ann Arbor, Mich.
139	36	(*)	36	(*)	12	36	(*)	12	24	Asheville, N.C.
5,039	448	212	75	161	268	337	148	148	41	Atlanta, Ga.
288	77	65	12	(*)	13	13	(*)	(*)	13	Atlantic City, N.J.
724	223	40	118	65	12	52	(*)	52	(*)	Augusta, Ga.-S.C.
1,471	146	99	23	24	256	114	13	44	57	Austin, Tex.
1,623	35	(*)	35	(*)	25	(*)	(*)	(*)	(*)	Bakersfield, Calif.
7,253	525	376	13	136	316	524	167	(*)	357	Baltimore, Md.
2,096	489	134	341	14	51	24	(*)	12	12	Baton Rouge, La.
224	12	12	(*)	(*)	13	13	(*)	(*)	13	Bay City, Mich.
1,634	13	13	(*)	(*)	14	14	(*)	14	(*)	Beaumont-Port Arthur-Orange, Tex.
425	48	(*)	48	(*)	(*)	16	16	(*)	(*)	Billings, Mont.
133	76	12	64	(*)	12	(*)	(*)	(*)	(*)	Biloxi-Gulfport, Miss.
2,322	51	38	13	(*)	(*)	47	19	14	14	Binghamton, N.Y.-Pa.
2,382	211	99	46	66	27	12	(*)	(*)	12	Birmingham, Ala.
209	41	28	13	(*)	37	27	(*)	12	15	Bloomington-Normal, Ill.
392	110	23	87	(*)	41	35	35	(*)	(*)	Boise City, Idaho
20,400	1,049	742	75	232	899	1,028	319	360	349	Boston, Mass.
1,790	66	66	(*)	(*)	52	42	30	12	(*)	Bridgeport, Conn.
319	49	49	(*)	(*)	12	27	(*)	13	14	Brockton, Mass.
109	12	(*)	12	(*)	(*)	(*)	(*)	(*)	(*)	Brownsville-Harlingen-San Benito, Tex.
4,954	441	188	(*)	253	204	419	203	78	138	Buffalo, N.Y.
1,135	11	11	(*)	(*)	41	(*)	(*)	(*)	(*)	Canton, Ohio
1,329	13	13	(*)	(*)	13	89	14	60	15	Cedar Rapids, Iowa
1,000	269	102	167	(*)	216	203	62	74	67	Champaign-Urbana, Ill.

Table B-4. Number of scientists and engineers by Standard

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema-ticians	Statis-ticians		Total	Earth scientists	Atmospheric scientists	Oceanog-raphers
Charleston, S.C.	1,187	97	97	(*)	(*)	12	12	(*)	(*)	13	(*)	(*)	13
Charleston, W.Va.	1,918	261	249	12	(*)	28	(*)	28	106	114	90	24	(*)
Charlotte, N.C.	1,849	120	120	(*)	(*)	37	37	(*)	139	28	28	(*)	(*)
Chattanooga, Tenn.-Ga.	2,137	119	108	11	(*)	13	13	(*)	12	12	12	(*)	(*)
Chicago, Ill.	36,875	4,668	4,036	555	77	992	617	375	2,691	273	238	35	(*)
Cincinnati, Ohio-Ky.-Ind.	9,469	1,295	1,247	23	25	206	178	28	351	48	36	(*)	12
Cleveland, Ohio	11,404	1,498	1,246	227	25	105	93	12	611	38	(*)	38	(*)
Colorado Springs, Colo.	930	50	25	25	(*)	48	48	(*)	124	12	(*)	12	(*)
Columbia, S.C.	1,566	130	118	12	(*)	91	91	(*)	32	27	27	(*)	(*)
Columbus, Ga.-Ala.	188	(*)	(*)	(*)	(*)	(*)	(*)	(*)	36	12	12	(*)	(*)
Columbus, Ohio	6,667	581	366	189	26	132	92	40	373	107	95	12	(*)
Corpus Christi, Tex.	1,334	116	116	(*)	(*)	13	13	(*)	17	110	110	(*)	(*)
Dallas, Tex.	12,209	845	632	174	39	316	255	61	883	979	769	210	(*)
Davenport-Moline, Iowa-Ill.	2,058	81	57	24	(*)	38	25	13	247	(*)	(*)	(*)	(*)
Dayton, Ohio	7,967	589	340	167	82	164	136	28	349	53	53	(*)	(*)
Decatur, Ill.	545	310	253	57	(*)	(*)	(*)	(*)	17	(*)	(*)	(*)	(*)
Denver, Colo.	13,777	1,158	674	374	110	178	168	10	735	1,990	1,930	60	(*)
Des Moines, Iowa	964	154	142	12	(*)	25	13	12	130	51	(*)	51	(*)
Detroit, Mich.	21,645	1,755	1,413	255	87	565	339	226	1,187	103	61	25	17
Dubuque, Iowa	249	(*)	(*)	(*)	(*)	12	12	(*)	(*)	12	(*)	12	(*)
Duluth-Superior, Minn.-Wis.	1,070	89	89	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Durham, N.C.	2,429	381	303	65	13	152	51	101	137	68	32	36	(*)
El Paso, Tex.	810	37	(*)	37	(*)	12	12	(*)	(*)	37	37	(*)	(*)
Erie, Pa.	1,339	88	24	64	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Eugene, Oreg.	1,215	104	104	(*)	(*)	(*)	(*)	(*)	17	22	22	(*)	(*)
Evansville, Ind.-Ky.	616	42	42	(*)	(*)	13	(*)	13	(*)	37	37	(*)	(*)
Fall River, Mass.-R.I.	86	13	(*)	13	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fargo-Moorhead, N.D.-Minn.	258	68	68	(*)	(*)	24	12	12	(*)	29	29	(*)	(*)
Fayetteville, N.C.	121	24	24	(*)	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Fitchburg-Leominster, Mass.	296	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Flint, Mich.	1,759	83	83	(*)	(*)	45	45	(*)	17	(*)	(*)	(*)	(*)
Fort Lauderdale-Hollywood, Fla.	1,393	223	196	15	12	(*)	(*)	(*)	52	13	13	(*)	(*)
Fort Smith, Ark.-Okla.	37	25	25	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Wayne, Ind.	1,859	111	72	39	(*)	50	50	(*)	103	(*)	(*)	(*)	(*)
Fort Worth, Tex.	4,479	223	187	36	(*)	72	72	(*)	405	110	96	14	(*)

Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
760	148	12	86	50	40	117	(*)	(*)	117	Charleston, S.C.
1,360	22	11	(*)	11	14	13	(*)	(*)	13	Charleston, W.Va.
1,204	56	16	13	27	12	253	(*)	167	86	Charlotte, N.C.
1,740	131	12	119	(*)	95	15	(*)	15	(*)	Chattanooga, Tenn.-Ga.
23,396	2,160	1,277	384	499	1,541	1,154	407	411	336	Chicago, Ill.
6,427	438	350	11	77	278	426	254	26	146	Cincinnati, Ohio-Ky.-Ind.
7,952	477	326	(*)	151	527	196	55	55	86	Cleveland, Ohio
504	24	11	13	(*)	143	25	(*)	(*)	25	Colorado Springs, Colo.
1,118	11	(*)	11	(*)	97	60	32	(*)	28	Columbia, S.C.
36	13	13	(*)	(*)	91	(*)	(*)	(*)	(*)	Columbus, Ga.-Ala.
4,553	409	237	84	88	225	287	140	25	122	Columbus, Ohio
857	157	25	117	15	64	(*)	(*)	(*)	(*)	Corpus Christi, Tex.
8,260	425	266	108	51	303	198	130	24	44	Dallas, Tex.
1,622	13	13	(*)	(*)	25	32	19	(*)	13	Davenport-Moline, Iowa-Ill.
6,573	78	64	(*)	14	117	44	18	(*)	26	Dayton, Ohio
204	(*)	(*)	(*)	(*)	14	(*)	(*)	(*)	(*)	Decatur, Ill.
8,469	450	224	188	38	402	395	141	174	80	Denver, Colo.
372	180	102	64	14	30	22	(*)	11	11	Des Moines, Iowa
16,687	558	467	(*)	91	442	348	176	29	143	Detroit, Mich.
202	23	12	11	(*)	(*)	(*)	(*)	(*)	(*)	Dubuque, Iowa
650	127	33	46	48	11	193	(*)	(*)	193	Duluth-Superior, Minn.-Wis.
709	406	254	24	128	101	475	95	239	141	Durham, N.C.
605	39	26	13	(*)	80	(*)	(*)	(*)	(*)	El Paso, Tex.
1,061	12	(*)	12	(*)	132	34	19	(*)	15	Erie, Pa.
397	332	11	321	(*)	217	126	48	78	(*)	Eugene, Oreg.
322	162	97	(*)	65	40	(*)	(*)	(*)	(*)	Evansville, Ind.-Ky.
49	24	12	(*)	12	(*)	(*)	(*)	(*)	(*)	Fall River, Mass.-R.I.
27	97	25	72	(*)	13	(*)	(*)	(*)	(*)	Fargo-Moorhead, N.D.-Minn.
85	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Fayetteville, N.C.
296	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Fitchburg-Leominster, Mass.
1,386	228	(*)	228	(*)	(*)	(*)	(*)	(*)	(*)	Flint, Mich.
1,008	26	(*)	(*)	26	54	17	(*)	(*)	17	Fort Lauderdale-Hollywood, Fla.
12	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Fort Smith, Ark.-Okla.
1,542	(*)	(*)	(*)	(*)	38	15	(*)	15	(*)	Fort Wayne, Ind.
3,257	221	154	23	44	80	111	15	(*)	96	Fort Worth, Tex.

Table B-4. Number of scientists and engineers by Standard

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema-ticians	Statis-ticians		Total	Earth scientists	Atmospheric scientists	Oceanog-raphers
Fresno, Calif.	1,034	74	63	11	(*)	(*)	(*)	(*)	53	64	64	(*)	(*)
Gadsen, Ala.	236	(*)	(*)	(*)	(*)	19	19	(*)	(*)	34	34	(*)	(*)
Galveston-Texas City, Tex.	938	317	317	(*)	(*)	(*)	(*)	(*)	17	9	9	(*)	(*)
Gary-Hammond-East Chicago, Ind.	2,088	305	289	16	(*)	(*)	(*)	(*)	36	12	12	(*)	(*)
Grand Rapids, Mich.	1,474	200	131	69	(*)	26	26	(*)	53	12	12	(*)	(*)
Great Falls, Mont.	205	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Green Bay, Wis.	904	73	73	(*)	(*)	19	19	(*)	61	11	11	(*)	(*)
Greensboro, N.C.	3,079	466	427	39	(*)	48	29	19	437	12	12	(*)	(*)
Greenville, S.C.	1,543	240	188	52	(*)	65	49	16	17	(*)	(*)	(*)	(*)
Hamilton-Middletown, Ohio	1,080	100	100	(*)	(*)	43	43	(*)	36	25	25	(*)	(*)
Harrisburg, Pa.	2,613	219	172	25	22	88	57	31	279	159	159	(*)	(*)
Hartford, Conn.	8,434	360	229	118	13	195	53	142	803	(*)	(*)	(*)	(*)
Honolulu, Hawaii	3,842	297	200	97	(*)	37	37	(*)	227	161	125	23	13
Houston, Texas	20,709	1,593	1,374	166	53	341	260	81	1,034	2,343	2,331	12	(*)
Huntington-Ashland, W.Va.-Ky.-Ohio	868	76	76	(*)	(*)	13	13	(*)	73	25	25	(*)	(*)
Huntsville, Ala.	5,844	268	24	232	12	118	118	(*)	297	70	(*)	70	(*)
Indianapolis, Ind.	5,308	871	871	(*)	(*)	128	62	66	337	24	12	12	(*)
Jackson, Mich.	1,130	39	39	(*)	(*)	(*)	(*)	(*)	17	(*)	(*)	(*)	(*)
Jackson, Miss.	1,191	102	89	13	(*)	12	(*)	12	113	110	110	(*)	(*)
Jacksonville, Fla.	1,470	103	103	(*)	(*)	39	26	13	37	24	12	12	(*)
Jersey City, N.J.	1,559	346	179	167	(*)	(*)	(*)	(*)	34	(*)	(*)	(*)	(*)
Johnstown, Pa.	851	(*)	(*)	(*)	(*)	(*)	(*)	(*)	29	12	12	(*)	(*)
Kalamazoo, Mich.	1,145	543	501	13	29	39	13	26	37	29	29	(*)	(*)
Kansas City, Mo.-Kans.	5,852	533	480	13	40	27	(*)	27	139	51	27	24	(*)
Kenosha, Wis.	227	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	12	12	(*)	(*)
Knoxville, Tenn.	4,497	915	559	203	153	13	13	(*)	113	12	12	(*)	(*)
Lafayette, La.	691	(*)	(*)	(*)	(*)	13	13	(*)	(*)	227	227	(*)	(*)
Lafayette-West Lafayette, Ind.	1,678	413	259	142	12	62	49	13	68	46	34	12	(*)
Lake Charles, La.	633	124	124	(*)	(*)	(*)	(*)	(*)	11	12	12	(*)	(*)
Lancaster, Pa.	1,515	308	257	39	12	13	13	(*)	33	23	13	(*)	10
Lansing, Mich.	2,939	248	183	65	(*)	223	126	97	63	103	78	25	(*)
Laredo, Texas	35	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Las Vegas, Nev.	793	12	(*)	(*)	12	132	120	12	36	55	55	(*)	(*)
Lawrence-Haverhill, Mass.-N.H.	1,621	50	50	(*)	(*)	36	12	24	87	11	11	(*)	(*)
Lawton, Okla.	61	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
550	233	153	80	(*)	26	34	34	(*)	(*)	Fresno, Calif.
62	109	(*)	109	(*)	12	(*)	(*)	(*)	(*)	Gadsen, Ala.
419	149	88	(*)	61	27	(*)	(*)	(*)	(*)	Galveston-Texas City, Tex.
1,498	33	33	(*)	(*)	27	177	116	46	15	Gary-Hammond-East Chicago, Ind.
980	50	13	24	13	38	115	37	61	17	Grand Rapids, Mich.
193	12	12	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Great Falls, Mont.
550	61	12	49	(*)	12	117	(*)	117	(*)	Green Bay, Wisc.
1,607	278	153	105	20	13	218	117	26	75	Greensboro, N.C.
1,013	137	45	92	(*)	14	57	45	12	(*)	Greenville, S.C.
638	144	37	107	(*)	47	47	18	29	(*)	Hamilton-Middletown, Ohio
1,413	145	13	97	35	121	189	24	12	153	Harrisburg, Pa.
6,528	102	29	(*)	73	131	315	18	207	90	Hartford, Conn.
2,155	354	263	91	(*)	239	372	153	100	119	Honolulu, Hawaii
14,442	395	284	43	68	332	229	113	80	36	Houston, Texas
565	12	(*)	12	(*)	58	46	30	16	(*)	Huntington-Ashland, W.Va.-Ky.-Ohio
4,988	65	13	52	(*)	(*)	38	(*)	11	27	Huntsville, Ala.
3,387	329	208	61	60	125	107	107	(*)	(*)	Indianapolis, Ind.
842	110	74	11	25	13	109	(*)	(*)	109	Jackson, Mich.
534	151	40	53	58	46	123	123	(*)	(*)	Jackson, Miss.
1,183	72	23	49	(*)	(*)	12	12	(*)	(*)	Jacksonville, Fla.
1,072	37	24	13	(*)	37	33	33	(*)	(*)	Jersey City, N.J.
530	27	13	14	(*)	120	133	14	(*)	119	Johnstown, Pa.
215	115	102	13	(*)	15	152	101	39	12	Kalamazoo, Mich.
4,096	373	90	144	139	307	326	139	24	163	Kansas City, Mo.-Kans.
150	(*)	(*)	(*)	(*)	(*)	65	(*)	(*)	65	Kenosha, Wisc.
2,894	384	261	123	(*)	54	112	62	26	24	Knoxville, Tenn.
392	18	18	(*)	(*)	(*)	41	17	12	12	Lafayette, La.
560	281	52	172	57	102	146	40	106	(*)	Lafayette-West Lafayette, Ind.
449	24	24	(*)	(*)	13	(*)	(*)	(*)	(*)	Lake Charles, La.
1,047	36	36	(*)	(*)	26	29	(*)	(*)	29	Lancaster, Pa.
1,356	458	335	123	(*)	123	365	271	68	26	Lansing, Mich.
35	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Laredo, Texas
481	50	50	(*)	(*)	14	13	(*)	(*)	13	Las Vegas, Nev.
1,380	(*)	(*)	(*)	(*)	40	17	17	(*)	(*)	Lawrence-Haverhill, Mass.-N.H.
48	13	13	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lawton, Okla.

Table B-4. Number of scientists and engineers by Standard

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema-ticians	Statis-ticians		Total	Earth scientists	Atmospheric scientists	Oceanog-raphers
Lewiston-Auburn, Maine	126	(*)	(*)	(*)	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Lexington, Ky.	1,435	165	117	48	(*)	13	(*)	13	67	40	40	(*)	(*)
Lima, Ohio	427	11	(*)	11	(*)	(*)	(*)	(*)	36	11	11	(*)	(*)
Lincoln, Nebr.	1,452	93	93	(*)	(*)	30	12	18	51	37	37	(*)	(*)
Little Rock-No. Little Rock, Ark.	1,267	131	118	(*)	13	122	(*)	122	71	36	36	(*)	(*)
Lorain-Elyria, Ohio	842	224	201	11	12	25	13	12	36	(*)	(*)	(*)	(*)
Los Angeles-Long Beach, Calif.	54,355	4,076	2,289	1,647	140	758	661	97	3,070	1,220	1,009	95	116
Louisville, Ky.	3,762	297	250	35	12	63	38	25	177	25	25	(*)	(*)
Lowell, Mass.	718	42	42	(*)	(*)	24	24	(*)	55	(*)	(*)	(*)	(*)
Lubbock, Texas	631	46	23	23	(*)	37	37	(*)	(*)	37	11	26	(*)
Lynchburg, Va.	917	134	110	12	12	(*)	(*)	(*)	17	(*)	(*)	(*)	(*)
Macon, Ga.	728	12	(*)	12	(*)	24	13	11	(*)	(*)	(*)	(*)	(*)
Madison, Wis.	4,150	943	651	147	145	162	49	113	101	62	50	12	(*)
Manchester, N.H.	284	23	23	(*)	(*)	(*)	(*)	(*)	(*)	73	(*)	(*)	73
Mansfield, Ohio	612	(*)	(*)	(*)	(*)	(*)	(*)	(*)	17	(*)	(*)	(*)	(*)
Mayaguez, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
McAllen-Pharr-Edinburg, Tex.	289	102	50	52	(*)	(*)	(*)	(*)	(*)	12	12	(*)	(*)
Memphis, Tenn.-Ark.	1,635	333	306	27	(*)	12	12	(*)	17	(*)	(*)	(*)	(*)
Meriden, Conn.	243	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Miami, Fla.	3,213	454	258	158	38	51	51	(*)	219	143	36	76	31
Midland, Tex.	1,497	27	(*)	(*)	27	(*)	(*)	(*)	(*)	660	660	(*)	(*)
Milwaukee, Wis.	6,566	716	664	52	(*)	37	25	12	239	186	143	43	(*)
Minneapolis-St. Paul, Minn.	16,141	2,135	1,698	393	44	242	121	121	1,087	96	84	12	(*)
Mobile, Ala.	1,203	108	108	(*)	(*)	34	34	(*)	51	26	26	(*)	(*)
Monroe, La.	142	(*)	(*)	(*)	(*)	13	13	(*)	(*)	23	23	(*)	(*)
Montgomery, Ala.	684	41	41	(*)	(*)	64	51	13	66	(*)	(*)	(*)	(*)
Muncie, Ind.	607	23	23	(*)	(*)	26	26	(*)	(*)	(*)	(*)	(*)	(*)
Muskegon-Muskegon Heights, Mich.	381	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Nashville, Tenn.	2,372	419	381	38	(*)	50	37	13	136	46	34	12	(*)
New Bedford, Mass.	337	12	12	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New Britain, Conn.	364	28	28	(*)	(*)	26	26	(*)	(*)	11	11	(*)	(*)
New Haven, Conn.	2,891	632	482	150	(*)	71	50	21	164	46	(*)	10	36
New London-Groton-Norwich, Conn.	2,012	169	134	35	(*)	115	89	26	99	112	(*)	(*)	112
New Orleans, La.	6,686	339	266	61	12	40	27	13	184	1,061	1,049	12	(*)
New York, N.Y.	50,113	5,415	3,464	1,489	462	1,517	987	530	4,763	523	390	109	24

Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
36	13	(*)	13	(*)	12	53	40	(*)	13	Lewiston-Auburn, Maine
862	150	51	62	37	66	72	(*)	57	15	Lexington, Ky.
343	13	(*)	13	(*)	13	(*)	(*)	(*)	(*)	Lima, Ohio
822	320	111	209	(*)	51	48	48	(*)	(*)	Lincoln, Nebr.
690	102	51	12	39	68	47	33	(*)	14	Little Rock-No. Little Rock, Ark.
476	54	54	(*)	(*)	13	14	(*)	14	(*)	Lorain-Elyria, Ohio
40,918	1,604	825	180	599	1,366	1,343	570	314	459	Los Angeles-Long Beach, Calif.
2,637	123	86	12	25	256	184	137	31	16	Louisville, Ky.
597	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lowell, Mass.
274	158	90	68	(*)	24	55	(*)	41	14	Lubbock, Texas
660	53	41	12	(*)	(*)	53	(*)	53	(*)	Lynchburg, Va.
623	38	16	22	(*)	14	17	(*)	17	(*)	Macon, Ga.
1,390	1,040	672	165	203	92	360	90	29	241	Madison, Wis.
152	12	12	(*)	(*)	24	(*)	(*)	(*)	(*)	Manchester, N.H.
583	(*)	(*)	(*)	(*)	12	(*)	(*)	(*)	(*)	Mansfield, Ohio
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Mayaguez, P.R.
135	25	13	12	(*)	(*)	15	15	(*)	(*)	McAllen-Pharr-Edinburg, Tex.
882	86	36	12	38	166	139	47	37	55	Memphis, Tenn.-Ark.
243	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Meriden, Conn.
1,929	182	132	12	38	143	92	32	31	29	Miami, Fla.
810	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Midland, Tex.
4,605	188	71	22	95	362	233	(*)	100	133	Milwaukee, Wis.
10,776	757	282	387	88	559	489	300	36	153	Minneapolis-St. Paul, Minn.
810	133	98	35	(*)	13	28	(*)	11	17	Mobile, Ala.
73	33	22	11	(*)	(*)	(*)	(*)	(*)	(*)	Monroe, La.
301	49	26	23	(*)	(*)	163	34	(*)	129	Montgomery, Ala.
458	41	41	(*)	(*)	29	30	(*)	(*)	30	Muncie, Ind.
368	(*)	(*)	(*)	(*)	13	(*)	(*)	(*)	(*)	Muskegon-Muskegon Heights, Mich.
1,216	308	130	13	165	61	136	63	12	61	Nashville, Tenn.
232	74	74	(*)	(*)	19	(*)	(*)	(*)	(*)	New Bedford, Mass.
273	(*)	(*)	(*)	(*)	14	12	(*)	12	(*)	New Britain, Conn.
1,463	301	206	37	58	92	122	44	54	24	New Haven, Conn.
1,292	80	11	(*)	69	81	64	(*)	(*)	64	New London-Groton-Norwich, Conn.
4,480	357	208	28	121	80	145	87	43	15	New Orleans, La.
28,033	2,921	1,464	308	1,149	2,963	3,978	2,049	725	1,204	New York, N.Y.

Table B-4. Number of scientists and engineers by Standard

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema-ticians	Statis-ticians		Total	Earth scientists	Atmospheric scientists	Oceanog-raphers
Newark, N.J.	18,574	3,762	3,183	454	125	391	242	149	1,325	21	21	(*)	(*)
Newport News-Hampton, Va.	3,090	111	75	12	24	48	48	(*)	157	26	(*)	26	(*)
Norfolk-Portsmouth, Va.	1,469	153	113	40	(*)	75	56	19	100	30	(*)	16	14
Norwalk, Conn.	1,050	117	117	(*)	(*)	13	13	(*)	32	12	12	(*)	(*)
Odessa, Tex.	301	25	25	(*)	(*)	(*)	(*)	(*)	(*)	12	12	(*)	(*)
Ogden, Utah	597	62	50	12	(*)	19	19	(*)	17	12	12	(*)	(*)
Oklahoma City, Okla.	3,675	244	121	110	13	63	26	37	275	545	504	41	(*)
Omaha, Nebr.-Iowa	2,089	49	26	23	(*)	25	25	(*)	344	24	24	(*)	(*)
Orlando, Fla.	4,292	87	51	36	(*)	98	23	75	180	(*)	(*)	(*)	(*)
Oxnard-Ventura, Calif.	3,006	120	25	59	36	114	114	(*)	165	47	24	14	9
Peterson-Clifton-Passaic, N.J.	7,099	1,427	1,261	13	153	30	14	16	413	12	(*)	12	(*)
Pensacola, Fla.	996	136	101	35	(*)	25	13	12	16	(*)	(*)	(*)	(*)
Peoria, Ill.	2,536	295	295	(*)	(*)	13	13	(*)	109	11	11	(*)	(*)
Philadelphia, Pa.-N.J.	30,654	4,343	3,753	515	75	583	360	223	1,592	59	59	(*)	(*)
Phoenix, Ariz.	6,612	444	270	137	37	239	210	29	314	62	62	(*)	(*)
Pine Bluff, Ark.	210	25	25	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Pittsburgh, Pa.	16,437	1,648	1,143	479	26	282	183	99	718	309	309	(*)	(*)
Pittsfield, Mass.	1,011	126	126	(*)	(*)	(*)	(*)	(*)	16	(*)	(*)	(*)	(*)
Ponce, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Portland, Maine	714	12	(*)	12	(*)	26	13	13	16	(*)	(*)	(*)	(*)
Portland, Oreg.-Wash.	6,031	444	248	196	(*)	237	93	144	99	103	76	27	(*)
Providence-Warwick-Pawtucket, R.I.-Mass.	2,990	416	379	37	(*)	83	70	13	209	24	13	(*)	11
Provo-Orem, Utah	430	11	(*)	11	(*)	12	12	(*)	16	33	33	(*)	(*)
Pueblo, Colo.	337	(*)	(*)	(*)	(*)	12	(*)	12	(*)	(*)	(*)	(*)	(*)
Racine, Wis.	576	107	107	(*)	(*)	(*)	(*)	(*)	127	(*)	(*)	(*)	(*)
Raleigh, N.C.	2,672	317	264	38	15	83	70	13	147	75	25	50	(*)
Reading, Pa.	1,735	179	155	(*)	24	12	12	(*)	160	12	12	(*)	(*)
Reno, Nev.	549	37	25	12	(*)	12	12	(*)	(*)	63	63	(*)	(*)
Richmond, Va.	3,114	388	351	25	12	50	24	26	154	36	24	12	(*)
Roanoke, Va.	550	(*)	(*)	(*)	(*)	19	19	(*)	18	35	35	(*)	(*)
Rochester, N.Y.	8,666	2,102	1,666	322	114	392	170	222	490	120	120	(*)	(*)
Rockford, Ill.	1,021	50	50	(*)	(*)	16	(*)	16	(*)	(*)	(*)	(*)	(*)
Sacramento, Calif.	6,069	443	364	50	29	179	166	13	368	104	91	13	(*)
Saginaw, Mich.	876	16	(*)	16	(*)	(*)	(*)	(*)	19	(*)	(*)	(*)	(*)
St. Joseph, Mo.	186	25	25	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

Metropolitan Statistical Area (SMSA) and field: 1974

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
11,728	887	670	37	180	334	126	50	76	(*)	Newark, N.J.
2,621	26	26	(*)	(*)	50	51	16	(*)	35	Newport News-Hampton, Va.
885	53	17	11	25	40	133	29	(*)	104	Norfolk-Portsmouth, Va.
777	62	62	(*)	(*)	37	(*)	(*)	(*)	(*)	Norwalk, Conn.
264	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Odessa, Tex.
380	48	13	35	(*)	14	45	33	(*)	12	Ogden, Utah
2,108	290	106	132	52	82	68	(*)	25	43	Oklahoma City, Okla.
1,371	174	101	37	36	52	50	35	15	(*)	Omaha, Nebr.-Iowa
3,740	101	11	90	(*)	41	45	31	14	(*)	Orlando, Fla.
2,305	204	76	128	(*)	51	(*)	(*)	(*)	(*)	Oxnard-Ventura, Calif.
4,832	198	168	(*)	30	105	82	52	(*)	30	Peterson-Clifton-Passaic, N.J.
763	25	25	(*)	(*)	13	18	18	(*)	(*)	Pensacola, Fla.
1,996	73	62	11	(*)	26	13	(*)	(*)	13	Peoria, Ill.
20,368	1,157	646	47	464	1,378	1,174	444	354	376	Philadelphia, Pa.-N.J.
4,830	158	23	123	12	208	357	267	47	43	Phoenix, Ariz.
148	37	13	24	(*)	(*)	(*)	(*)	(*)	(*)	Pine Bluff, Ark.
12,146	258	138	35	85	549	527	383	59	85	Pittsburgh, Pa.
855	14	(*)	14	(*)	(*)	(*)	(*)	(*)	(*)	Pittsfield, Mass.
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Ponce, P.R.
566	83	42	12	29	11	(*)	(*)	(*)	(*)	Portland, Maine
4,041	665	230	278	157	159	283	168	47	68	Portland, Oreg.-Wash.
1,458	215	128	23	64	339	246	14	26	206	Providence-Warwick-Pawtucket, R.I.-Mass.
229	51	25	(*)	26	50	28	(*)	(*)	28	Provo-Orem, Utah
240	58	25	33	(*)	27	(*)	(*)	(*)	(*)	Pueblo, Colo.
262	63	11	52	(*)	(*)	17	17	(*)	(*)	Racine, Wis.
1,494	390	205	185	(*)	54	112	66	26	20	Raleigh, N.C.
1,241	11	(*)	11	(*)	13	107	(*)	29	78	Reading, Pa.
328	29	(*)	12	17	13	67	43	24	(*)	Reno, Nev.
1,998	389	63	170	156	56	43	16	27	(*)	Richmond, Va.
321	(*)	(*)	(*)	(*)	13	144	(*)	121	23	Roanoke, Va.
5,080	136	86	(*)	50	184	162	41	36	85	Rochester, N.Y.
912	23	12	11	(*)	(*)	20	20	(*)	(*)	Rockford, Ill.
4,033	465	184	172	109	173	304	97	147	60	Sacramento, Calif.
841	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Saginaw, Mich.
150	11	11	(*)	(*)	(*)	(*)	(*)	(*)	(*)	St. Joseph, Mo.

Table B-4. Number of scientists and engineers by Standard

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema-ticians	Statis-ticians		Total	Earth scientists	Atmospheric scientists	Oceanog-raphers
St. Louis, Mo.-Ill.	12,239	1,261	1,048	137	76	316	278	38	665	63	37	26	(*)
Salem, Oreg.	631	24	(*)	12	12	(*)	(*)	(*)	71	26	26	(*)	(*)
Salinas-Monterey, Calif.	839	11	(*)	11	(*)	68	56	12	16	95	(*)	69	26
Salt Lake City, Utah	4,213	461	195	266	(*)	76	50	26	134	224	187	37	(*)
San Angelo, Tex.	333	71	58	13	(*)	(*)	(*)	(*)	116	13	13	(*)	(*)
San Antonio, Tex.	2,207	125	87	38	(*)	138	64	74	142	49	37	12	(*)
San Bernardino-Riverside-Ontario, Calif.	3,178	633	434	199	(*)	120	120	(*)	(*)	96	96	(*)	(*)
San Diego, Calif.	9,700	1,099	362	677	60	235	223	12	431	401	78	61	262
San Francisco-Oakland, Calif.	24,231	3,685	2,360	1,158	167	507	361	146	1,176	804	739	65	(*)
San Jose, Calif.	16,118	1,261	467	637	157	307	290	17	1,009	168	156	12	(*)
San Juan, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Santa Barbara, Calif.	2,493	194	23	171	(*)	61	61	(*)	108	69	45	24	(*)
Savannah, Ga.	678	24	24	(*)	(*)	13	13	(*)	(*)	52	52	(*)	(*)
Scranton, Pa.	341	(*)	(*)	(*)	(*)	(*)	(*)	(*)	17	(*)	(*)	(*)	(*)
Seattle-Everett, Wash.	15,265	748	421	315	12	183	152	31	691	111	51	25	35
Sherman-Denison, Tex.	226	24	24	(*)	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Shreveport, La.	857	(*)	(*)	(*)	(*)	37	37	(*)	16	242	242	(*)	(*)
Sioux City, Iowa-Nebr.	300	11	(*)	11	(*)	(*)	(*)	(*)	33	(*)	(*)	(*)	(*)
Sioux Falls, S.D.	215	89	65	24	(*)	45	32	13	(*)	(*)	(*)	(*)	(*)
South Bend, Ind.	1,145	85	61	24	(*)	94	94	(*)	127	(*)	(*)	(*)	(*)
Spokane, Wash.	699	35	11	12	12	37	37	(*)	27	61	61	(*)	(*)
Springfield, Ill.	1,369	139	127	(*)	12	48	36	12	118	12	12	(*)	(*)
Springfield, Mo.	181	(*)	(*)	(*)	(*)	13	13	(*)	(*)	(*)	(*)	(*)	(*)
Springfield, Ohio	127	35	24	11	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	1,814	492	455	12	25	26	26	(*)	87	13	13	(*)	(*)
Stamford, Conn.	1,737	186	132	54	(*)	(*)	(*)	(*)	208	(*)	(*)	(*)	(*)
Steubenville-Weirton, Ohio-W.Va.	336	20	20	(*)	(*)	12	12	(*)	16	(*)	(*)	(*)	(*)
Stockton, Calif.	411	23	23	(*)	(*)	39	39	(*)	16	(*)	(*)	(*)	(*)
Syracuse, N.Y.	4,419	450	270	121	59	165	64	101	293	11	11	(*)	(*)
Tacoma, Wash.	1,103	45	45	(*)	(*)	13	13	(*)	87	13	13	(*)	(*)
Tallahassee, Fla.	1,006	175	136	39	(*)	69	69	(*)	57	36	(*)	11	25
Tampa-St. Petersburg, Fla.	3,883	87	73	14	(*)	51	37	14	122	125	125	(*)	(*)
Terre Haute, Ind.	700	74	36	11	27	24	24	(*)	16	34	34	(*)	(*)
Texarkana- Tex.-Ark.	147	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	11	11	(*)	(*)
Toledo, Ohio-Mich.	2,844	273	155	118	(*)	56	56	(*)	138	88	88	(*)	(*)

Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
8,962	309	224	35	50	368	295	203	39	53	St. Louis, Mo.-Ill.
266	131	49	82	(*)	78	35	18	(*)	17	Salem, Oreg.
449	121	60	29	32	64	15	(*)	(*)	15	Salinas-Monterey, Calif.
2,905	158	82	64	12	172	83	60	11	12	Salt Lake City, Utah
122	11	11	(*)	(*)	(*)	(*)	(*)	(*)	(*)	San Angelo, Tex.
1,355	146	48	12	86	39	213	82	12	119	San Antonio, Tex.
1,635	429	180	192	57	159	106	(*)	(*)	106	San Bernardino-Riverside-Ontario, Calif.
6,274	504	453	25	26	381	375	19	104	252	San Diego, Calif.
13,850	2,133	1,295	563	275	654	1,422	591	193	638	San Francisco-Oakland, Calif.
12,252	614	291	132	191	384	123	72	36	15	San Jose, Calif.
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	San Juan, P.R.
1,694	82	82	(*)	(*)	202	83	17	25	41	Santa Barbara, Calif.
495	94	25	69	(*)	(*)	(*)	(*)	(*)	(*)	Savannah, Ga.
286	(*)	(*)	(*)	(*)	14	24	(*)	(*)	24	Scranton, Pa.
12,241	602	406	113	83	229	460	31	105	324	Seattle-Everett, Wash.
59	12	(*)	12	(*)	(*)	119	119	(*)	(*)	Sherman-Denison, Tex.
525	37	14	23	(*)	(*)	(*)	(*)	(*)	(*)	Shreveport, La.
215	(*)	(*)	(*)	(*)	(*)	41	41	(*)	(*)	Sioux City, Iowa-Nebr.
40	(*)	(*)	(*)	(*)	12	29	15	14	(*)	Sioux Falls, S.D.
784	40	40	(*)	(*)	(*)	15	(*)	(*)	15	South Bend, Ind.
325	147	16	131	(*)	14	53	36	(*)	17	Spokane, Wash.
894	85	57	28	(*)	59	14	(*)	14	(*)	Springfield, Ill.
75	78	(*)	78	(*)	(*)	15	(*)	(*)	15	Springfield, Mo.
51	(*)	(*)	(*)	(*)	(*)	41	14	(*)	27	Springfield, Ohio
982	53	53	(*)	(*)	68	93	(*)	67	26	Springfield-Chicopee-Holyoke, Mass.-Conn.
1,111	25	12	(*)	13	144	63	50	(*)	13	Stamford, Conn.
271	(*)	(*)	(*)	(*)	(*)	17	17	(*)	(*)	Steubenville-Weirton, Ohio-W.Va.
223	51	13	38	(*)	25	34	(*)	(*)	34	Stockton, Calif.
2,928	266	98	157	11	206	100	29	28	43	Syracuse, N.Y.
728	57	12	45	(*)	61	99	(*)	73	26	Tacoma, Wash.
275	83	25	58	(*)	198	113	81	(*)	32	Tallahassee, Fla.
2,918	227	201	13	13	155	198	26	73	99	Tampa-St. Petersburg, Fla.
442	37	25	12	(*)	13	60	18	42	(*)	Terre Haute, Ind.
100	23	12	11	(*)	13	(*)	(*)	(*)	(*)	Texarkana, Tex.-Ark.
2,089	65	27	26	12	78	57	57	(*)	(*)	Toledo, Ohio-Mich.

Table B-4. Number of scientists and engineers by Standard

Location	Total	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
		Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathema-ticians	Statis-ticians		Total	Earth scientists	Atmospheric scientists	Oceanog-raphers
Topeka, Kansas	1,167	85	73	12	(*)	12	(*)	12	66	60	47	13	(*)
Trenton, N.J.	4,455	985	685	180	120	191	134	57	187	61	36	12	13
Tucson, Ariz.	2,605	480	344	136	(*)	39	39	(*)	98	323	323	(*)	(*)
Tulsa, Okla.	3,389	104	104	(*)	(*)	42	42	(*)	284	333	333	(*)	(*)
Tuscaloosa, Ala.	353	31	18	13	(*)	12	12	(*)	17	25	25	(*)	(*)
Tyler, Texas	363	24	24	(*)	(*)	(*)	(*)	(*)	(*)	47	47	(*)	(*)
Utica-Rome, N.Y.	2,254	202	58	144	(*)	13	13	(*)	108	11	11	(*)	(*)
Vallejo-Napa, Calif.	928	(*)	(*)	(*)	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Vineland-Millville-Bridgeton, N.J.	151	(*)	(*)	(*)	(*)	(*)	(*)	(*)	36	(*)	(*)	(*)	(*)
Waco, Texas	391	78	78	(*)	(*)	(*)	(*)	(*)	(*)	15	15	(*)	(*)
Washington, D.C.-Md.-Va.	47,245	6,033	2,459	2,593	981	2,980	1,440	1,540	3,482	2,041	1,223	483	335
Waterbury, Conn.	973	303	303	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Waterloo, Iowa	471	12	(*)	12	(*)	(*)	(*)	(*)	17	12	12	(*)	(*)
West Palm Beach, Fla.	2,369	147	121	26	(*)	13	13	(*)	189	(*)	(*)	(*)	(*)
Wheeling, W.Va.-Ohio	399	20	20	(*)	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Wichita, Kansas	2,174	131	131	(*)	(*)	13	(*)	13	95	171	171	(*)	(*)
Wichita Falls, Tex.	392	12	(*)	12	(*)	44	44	(*)	13	143	143	(*)	(*)
Wilkes Barre-Hazelton, Pa.	560	57	46	11	(*)	12	12	(*)	(*)	(*)	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	5,869	2,001	1,948	13	40	84	25	59	177	111	25	28	58
Wilmington, N.C.	533	24	(*)	(*)	24	31	13	18	19	(*)	(*)	(*)	(*)
Worcester, Mass.	1,582	35	24	(*)	11	37	37	(*)	76	12	12	(*)	(*)
York, Pa.	1,086	64	64	(*)	(*)	26	26	(*)	(*)	(*)	(*)	(*)	(*)
Youngstown-Warren, Ohio	1,615	200	164	24	12	50	50	(*)	75	(*)	(*)	(*)	(*)
Non-SMSA	188,980	21,947	15,935	5,007	1,005	6,206	5,157	1,049	5,373	5,796	4,982	607	207
Outlying areas	783	75	49	14	12	(*)	(*)	(*)	38	(*)	(*)	(*)	(*)
Foreign	8,966	1,167	667	489	11	413	281	132	684	731	670	12	49
SMSA not reported	8,594	921	780	82	59	133	92	41	342	316	264	52	(*)

*No cases reported.
Note: Data are reported for SMSA of employment or SMSA of residence if not employed.
SOURCE: National Science Foundation, National Sample, 1974.

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Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
769	60	47	(*)	13	93	22	(*)	(*)	22	Topeka, Kansas
2,338	161	91	39	31	94	438	55	29	354	Trenton, N.J.
1,030	255	145	58	52	13	367	58	142	167	Tucson, Ariz.
2,561	52	24	28	(*)	13	(*)	(*)	(*)	(*)	Tulsa, Okla.
140	23	11	12	(*)	51	54	14	14	26	Tuscaloosa, Ala.
276	16	16	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Tyler, Texas
1,804	24	(*)	24	(*)	26	66	(*)	66	(*)	Utica-Rome, N.Y.
887	(*)	(*)	(*)	(*)	13	16	(*)	16	(*)	Vallejo-Napa, Calif.
75	12	12	(*)	(*)	13	15	15	(*)	(*)	Vineland-Millville-Bridgeton, N.J.
181	39	39	(*)	(*)	78	(*)	(*)	(*)	(*)	Waco, Texas
21,803	2,980	1,431	1,060	489	1,490	6,436	4,373	468	1,595	Washington, D.C.-Md.-Va.
637	(*)	(*)	(*)	(*)	(*)	33	33	(*)	(*)	Waterbury, Conn.
328	11	11	(*)	(*)	(*)	91	21	57	13	Waterloo, Iowa
1,882	100	52	35	13	13	25	(*)	(*)	25	West Palm Beach, Fla.
339	13	13	(*)	(*)	(*)	15	15	(*)	(*)	Wheeling, W.Va.-Ohio
1,644	35	23	(*)	12	53	32	18	(*)	14	Wichita, Kansas
166	(*)	(*)	(*)	(*)	(*)	14	(*)	14	(*)	Wichita Falls, Tex.
327	25	25	(*)	(*)	25	114	14	89	11	Wilkes Barre-Hazelton, Pa.
3,165	112	50	24	38	117	102	54	12	36	Wilmington, Del.-N.J.-Md.
389	25	25	(*)	(*)	12	33	(*)	(*)	33	Wilmington, N.C.
1,270	83	60	11	12	39	30	19	(*)	11	Worcester, Mass.
837	80	26	54	(*)	13	66	(*)	66	(*)	York, Pa.
1,177	(*)	(*)	(*)	(*)	113	(*)	(*)	(*)	(*)	Youngstown-Warren, Ohio
105,051	29,486	11,499	16,609	1,378	6,203	8,918	3,110	2,363	3,445	Non-SMSA
569	75	38	24	13	14	12	(*)	12	(*)	Outlying areas
4,171	734	311	244	179	227	839	214	349	276	Foreign
5,110	647	287	258	102	369	756	220	166	370	SMSA not reported

Table B-5. Number of scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974

Location	Total	Doctorate	Professional/ Medical	Master's	Bachelor's	Associate	Other	No Degree
All areas, total	1,079,698	180,870	3,248	242,289	620,396	12,539	101	20,255
SMSA, total	872,375	137,010	2,848	200,205	504,482	10,573	88	17,169
Abilene, Tex.	310	124	(*)	26	160	(*)	(*)	(*)
Akron, Ohio	5,301	1,060	33	876	3,218	39	(*)	75
Albany, Ga.	246	12	(*)	48	186	(*)	(*)	(*)
Albany-Schenectady-Troy, N.Y.	7,307	1,793	(*)	1,897	3,357	95	(*)	165
Albuquerque, N.M.	3,780	962	(*)	1,236	1,549	(*)	(*)	33
Allentown-Bethlehem-Easton, Pa.-N.J.	3,281	495	(*)	686	2,052	48	(*)	(*)
Altoona, Pa.	268	25	(*)	91	63	(*)	(*)	89
Amarillo, Tex.	685	84	(*)	105	496	(*)	(*)	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	13,052	1,681	14	3,197	7,476	502	(*)	182
Anderson, Ind.	638	74	(*)	103	461	(*)	(*)	(*)
Ann Arbor, Mich.	4,371	1,604	29	1,360	1,378	(*)	(*)	(*)
Asheville, N.C.	421	24	(*)	82	315	(*)	(*)	(*)
Atlanta, Ga.	7,868	1,347	97	1,217	4,777	193	(*)	237
Atlantic City, N.J.	475	78	(*)	64	333	(*)	(*)	(*)
Augusta, Ga.-S.C.	1,431	341	(*)	172	906	12	(*)	(*)
Austin, Tex.	2,769	688	(*)	838	1,162	(*)	(*)	81
Bakersfield, Calif.	2,162	206	(*)	709	1,247	(*)	(*)	(*)
Baltimore, Md.	11,415	1,320	102	2,610	6,919	109	(*)	355
Baton Rouge, La.	3,230	688	(*)	551	1,991	(*)	(*)	(*)
Bay City, Mich.	275	26	(*)	12	125	112	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	2,001	135	(*)	273	1,525	(*)	(*)	68
Billings, Mont.	586	60	(*)	36	454	36	(*)	(*)
Biloxi-Gulfport, Miss.	267	64	(*)	37	166	(*)	(*)	(*)
Binghamton, N.Y.-Pa.	2,978	203	(*)	900	1,589	181	(*)	105
Birmingham, Ala.	2,864	159	28	465	2,212	(*)	(*)	(*)
Bloomington-Normal, Ill.	406	97	(*)	43	213	(*)	(*)	53
Boise City, Ind.	763	123	(*)	125	515	(*)	(*)	(*)
Boston, Mass.	30,156	5,673	77	8,189	14,888	979	39	311
Bridgeport, Conn.	2,367	140	(*)	377	1,745	40	(*)	65
Brockton, Mass.	582	160	(*)	103	319	(*)	(*)	65
Brownsville-Harlingen-San Benito, Tex.	121	(*)	(*)	63	58	(*)	(*)	(*)
Buffalo, N.Y.	7,309	1,275	(*)	1,652	4,216	89	(*)	77
Canton, Ohio	1,327	98	(*)	200	900	(*)	(*)	129
Cedar Rapids, Iowa	1,497	113	(*)	264	1,072	48	(*)	(*)
Champaign-Urbana, Ill.	2,469	1,395	(*)	759	315	(*)	(*)	(*)
Charleston, S.C.	1,187	201	(*)	125	861	(*)	(*)	(*)
Charleston, W. Va.	1,918	58	(*)	417	1,443	(*)	(*)	(*)
Charlotte, N.C.	1,849	203	(*)	249	1,397	(*)	(*)	(*)
Chattanooga, Tenn.-Ga.	2,137	226	(*)	162	1,749	(*)	(*)	(*)
Chicago, Ill.	36,875	4,962	163	7,415	21,978	583	(*)	1,774
Cincinnati, Ohio-Ky.-Ind.	9,469	962	72	1,885	6,275	62	(*)	213
Cleveland, Ohio	11,404	1,973	55	2,428	6,854	13	(*)	81
Colorado Springs, Colo.	930	178	(*)	151	585	(*)	(*)	16
Columbia, S.C.	1,566	232	(*)	330	883	53	(*)	68
Columbus, Ga.-Ala.	188	51	(*)	101	36	(*)	(*)	(*)
Columbus, Ohio	6,667	1,063	25	1,604	3,825	(*)	(*)	150
Corpus Christi, Tex.	1,334	115	(*)	272	934	(*)	(*)	13
Dallas, Tex.	12,209	1,555	(*)	2,614	7,731	(*)	(*)	309
Davenport-Moline, Iowa-Ill.	2,058	50	(*)	470	1,498	(*)	(*)	40
Dayton, Ohio	7,967	869	(*)	1,490	5,518	13	(*)	77
Decatur, Ill.	545	192	(*)	25	328	(*)	(*)	(*)
Denver, Colo.	13,777	1,953	54	3,118	7,995	112	(*)	545
Des Moines, Iowa	964	113	(*)	201	650	(*)	(*)	(*)
Detroit, Mich.	21,645	2,323	13	4,772	13,743	327	(*)	467
Dubuque, Iowa	249	12	(*)	23	214	(*)	(*)	(*)

Table B-5. Number of scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974 (con.)

Location	Total	Doctorate	Professional/ Medical	Master's	Bachelor's	Associate	Other	No Degree
Duluth-Superior, Minn.-Wis.	1,070	114	(*)	120	836	(*)	(*)	(*)
Durham, N.C.	2,429	1,168	65	522	661	(*)	(*)	13
El Paso, Tex.	810	203	(*)	127	465	(*)	(*)	15
Erie, Pa.	1,339	247	(*)	226	760	(*)	(*)	106
Eugene, Oreg.	1,215	309	(*)	132	774	(*)	(*)	(*)
Evansville, Ind.-Ky.	616	189	(*)	78	336	13	(*)	(*)
Fall River, Mass.-R.I.	86	(*)	(*)	86	(*)	(*)	(*)	(*)
Fargo-Moorhead, N.D.-Minn.	258	181	(*)	29	48	(*)	(*)	(*)
Fayetteville, N.C.	121	(*)	(*)	14	107	(*)	(*)	(*)
Fitchburg-Leominster, Mass.	296	(*)	(*)	12	284	(*)	(*)	(*)
Flint, Mich.	1,759	137	(*)	157	1,453	(*)	(*)	12
Fort Lauderdale-Hollywood, Fla.	1,393	148	(*)	224	917	104	(*)	(*)
Fort Smith, Ark.-Okla.	37	(*)	(*)	12	25	(*)	(*)	(*)
Fort Wayne, Ind.	1,859	172	(*)	98	1,512	(*)	(*)	77
Fort Worth, Tex.	4,479	413	(*)	1,068	2,580	64	(*)	354
Fresno, Calif.	1,034	137	(*)	160	725	12	(*)	(*)
Gadsen, Ala.	236	12	(*)	53	171	(*)	(*)	(*)
Galveston-Texas City, Tex.	938	194	25	230	489	(*)	(*)	(*)
Gary-Hammond-East Chicago, Ind.	2,088	355	(*)	355	1,343	(*)	(*)	35
Grand Rapids, Mich.	1,474	200	(*)	373	887	14	(*)	(*)
Great Falls, Mont.	205	(*)	(*)	12	193	(*)	(*)	(*)
Green Bay, Wis.	904	51	(*)	42	781	(*)	(*)	30
Greensboro, N.C.	3,079	478	(*)	801	1,747	(*)	(*)	53
Greenville, S.C.	1,543	425	(*)	227	813	(*)	(*)	78
Hamilton-Middletown, Ohio	1,080	187	(*)	189	665	(*)	(*)	39
Harrisburg, Pa.	2,613	345	(*)	517	1,751	(*)	(*)	(*)
Hartford, Conn.	8,434	618	12	2,567	5,082	87	(*)	68
Honolulu Hawaii	3,842	760	(*)	714	2,322	(*)	(*)	46
Houston, Tex.	20,709	2,273	50	4,183	13,949	89	(*)	165
Huntington-Ashland, W.Va.-Ky.-Ohio	868	107	20	102	589	(*)	(*)	50
Huntsville, Ala.	5,844	220	(*)	1,193	4,378	(*)	(*)	53
Indianapolis, Ind.	5,308	669	(*)	1,378	3,119	14	(*)	128
Jackson, Mich.	1,130	38	(*)	236	804	(*)	(*)	52
Jackson, Miss.	1,191	162	12	261	745	(*)	(*)	11
Jacksonville, Fla.	1,470	156	12	371	931	(*)	(*)	(*)
Jersey City, N.J.	1,559	272	(*)	222	1,013	(*)	(*)	52
Johnstown, Pa.	851	130	(*)	159	562	(*)	(*)	(*)
Kalamazoo, Mich.	1,145	499	(*)	231	415	(*)	(*)	(*)
Kansas City, Mo.-Kans.	5,852	583	(*)	736	4,205	211	(*)	117
Kenosha, Wis.	227	77	(*)	37	113	(*)	(*)	(*)
Knoxville, Tenn.	4,497	946	(*)	1,073	2,401	(*)	(*)	77
Lafayette, La.	691	41	(*)	174	463	13	(*)	(*)
Lafayette-West Lafayette, Ind.	1,678	766	29	324	559	(*)	(*)	(*)
Lake Charles, La.	633	37	(*)	225	371	(*)	(*)	(*)
Lancaster, Pa.	1,515	142	(*)	172	1,201	(*)	(*)	(*)
Lansing, Mich.	2,939	983	(*)	776	1,180	(*)	(*)	(*)
Laredo, Tex.	35	(*)	(*)	(*)	35	(*)	(*)	(*)
Las Vegas, Nev.	793	66	(*)	103	523	51	(*)	51
Lawrence-Haverhill, Mass.-N.H.	1,621	39	(*)	585	738	87	(*)	172
Lawton, Okla.	61	(*)	(*)	26	35	(*)	(*)	(*)
Lewiston-Auburn, Maine	126	37	(*)	(*)	89	(*)	(*)	(*)
Lexington, Ky.	1,435	463	(*)	387	585	(*)	(*)	(*)
Lima, Ohio	427	35	39	(*)	250	(*)	(*)	103
Lincoln, Nebr.	1,452	573	(*)	145	734	(*)	(*)	(*)
Little Rock-No. Little Rock, Ark.	1,267	148	26	219	787	(*)	(*)	87
Lorain-Elyria, Ohio	842	77	(*)	133	575	16	(*)	41
Los Angeles-Long Beach, Calif.	54,355	5,893	157	15,098	30,193	1,649	(*)	1,365
Louisville, Ky.	3,762	527	12	852	2,330	(*)	(*)	41
Lowell, Mass.	718	27	(*)	313	305	(*)	(*)	73
Lubbock, Tex.	631	283	(*)	141	207	(*)	(*)	(*)

Table B-5. Number of scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974 (con.)

Location	Total	Doctorate	Professional/ Medical	Master's	Bachelor's	Associate	Other	No Degree
Lynchburg, Va.	917	132	(*)	220	565	(*)	(*)	(*)
Macon, Ga.	728	56	(*)	40	632	(*)	(*)	(*)
Madison, Wis.	4,150	1,734	25	1,004	1,387	(*)	(*)	(*)
Manchester, N.H.	284	84	(*)	99	89	12	(*)	(*)
Mansfield, Ohio	612	12	(*)	30	466	(*)	(*)	104
Mayaguez, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
McAllen-Pharr-Edinburg, Tex.	289	87	(*)	126	76	(*)	(*)	(*)
Memphis, Tenn.-Ark.	1,635	285	25	405	920	(*)	(*)	(*)
Meriden, Conn.	243	(*)	(*)	47	144	(*)	(*)	52
Miami, Fla.	3,213	587	(*)	460	2,006	25	(*)	135
Midland, Tex.	1,497	13	(*)	242	1,242	(*)	(*)	(*)
Milwaukee, Wisc.	6,566	837	25	1,035	4,405	114	(*)	150
Minneapolis-St. Paul, Minn.	16,141	2,100	157	2,513	11,098	112	(*)	161
Mobile, Ala.	1,203	217	17	217	752	(*)	(*)	(*)
Monroe, La.	142	57	(*)	24	61	(*)	(*)	(*)
Montgomery, Ala.	684	(*)	(*)	346	338	(*)	(*)	(*)
Muncie, Ind.	607	118	(*)	106	383	(*)	(*)	(*)
Muskegon-Muskegon Heights, Mich.	381	(*)	(*)	25	356	(*)	(*)	(*)
Nashville, Tenn	2,372	622	105	283	1,362	(*)	(*)	(*)
New Bedford, Mass.	337	31	(*)	(*)	255	51	(*)	(*)
New Britain, Conn.	364	64	(*)	60	240	(*)	(*)	(*)
New Haven, Conn.	2,891	1,068	21	452	1,084	154	(*)	112
New London-Groton-Norwich, Conn.	2,012	285	(*)	591	1,067	(*)	(*)	69
New Orleans, La.	6,686	597	50	1,466	4,499	(*)	(*)	74
New York, N.Y.	50,113	9,368	229	14,360	24,230	831	(*)	1,095
Newark, N.J.	18,574	3,201	(*)	5,912	8,997	17	(*)	447
Newport News-Hampton, Va.	3,090	291	(*)	792	1,942	13	(*)	52
Norfolk-Portsmouth, Va.	1,469	221	(*)	553	657	38	(*)	(*)
Norwalk, Conn.	1,050	142	(*)	329	579	(*)	(*)	(*)
Odessa, Tex.	301	12	(*)	12	265	(*)	12	(*)
Ogden, Utah	597	81	(*)	160	341	15	(*)	(*)
Oklahoma City, Okla.	3,675	573	47	601	2,454	(*)	(*)	(*)
Omaha, Nebr.-Iowa	2,089	178	(*)	629	1,110	(*)	(*)	172
Orlando, Fla.	4,292	303	(*)	1,379	2,485	38	(*)	87
Oxnard-Ventura, Calif.	3,0[illegible]	177	(*)	599	2,128	39	(*)	63
Paterson-Clifton-Passaic, N.J.	7,099	548	33	1,711	4,578	53	(*)	176
Pensacola, Fla.	996	117	(*)	272	607	(*)	(*)	(*)
Peoria, Ill.	2,536	196	(*)	580	1,699	(*)	(*)	61
Philadelphia, Pa.-N.J.	30,654	4,511	83	7,958	17,511	197	(*)	394
Phoenix, Ariz.	6,612	760	(*)	1,303	4,460	89	(*)	(*)
Pine Bluff, Ark.	210	13	(*)	24	139	(*)	(*)	34
Pittsburgh, Pa.	16,437	2,699	64	3,303	9,972	32	37	330
Pittsfield, Mass.	1,011	105	(*)	350	509	(*)	(*)	47
Ponce, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Portland, Maine	714	68	(*)	99	547	(*)	(*)	(*)
Portland, Oreg.-Wash.	6,031	863	53	926	3,996	90	(*)	103
Providence-Warwick-Pawtucket, R.I.-Mass.	2,990	600	17	690	1,633	39	(*)	11
Provo-Orem, Utah	430	134	(*)	111	185	(*)	(*)	(*)
Pueblo, Colo.	337	13	(*)	50	236	(*)	(*)	38
Racine, Wis.	576	(*)	(*)	111	465	(*)	(*)	(*)
Raleigh, N.C.	2,672	696	(*)	604	1,261	78	(*)	33
Reading, Pa.	1,735	126	(*)	474	1,097	(*)	(*)	38
Reno, Nev.	549	121	(*)	71	321	(*)	(*)	36
Richmond, Va.	3,114	442	(*)	399	2,097	89	(*)	87
Roanoke, Va.	550	23	(*)	188	339	(*)	(*)	(*)
Rochester, N.Y.	8,666	1,482	26	2,064	4,841	140	(*)	113
Rockford, Ill.	1,021	69	(*)	171	717	(*)	(*)	64
Sacramento, Calif.	6,069	995	(*)	957	3,760	291	(*)	66
Saginaw, Mich.	876	16	(*)	120	700	(*)	(*)	40
St. Joseph, Mo.	186	(*)	(*)	49	124	13	(*)	(*)

Table B-5. Number of scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974 (con.)

Location	Total	Doctorate	Professional/ Medical	Master's	Bachelor's	Associate	Other	No Degree
St. Louis, Mo.-Ill.	12,239	1,528	39	2,278	7,934	80	(*)	380
Salem, Oreg.	631	132	(*)	89	410	(*)	(*)	(*)
Salinas-Monterey, Calif.	839	302	(*)	111	426	(*)	(*)	(*)
Salt Lake City, Utah	4,213	778	(*)	575	2,818	14	(*)	28
San Angelo, Tex.	333	82	(*)	(*)	251	(*)	(*)	(*)
San Antonio, Tex.	2,207	252	25	469	1,461	(*)	(*)	(*)
San Bernardio-Riverside-Ontario, Calif.	3,178	550	(*)	687	1,775	102	(*)	64
San Diego, Calif.	9,700	1,903	13	2,625	4,842	179	(*)	138
San Francisco Oakland, Calif.	24,231	4,507	62	5,875	12,953	499	(*)	335
San Jose, Calif.	16,118	2,306	58	4,872	8,025	307	(*)	550
San Juan, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Santa Barbara, Calif.	2,493	524	14	593	1,232	53	(*)	77
Savannah, Ga.	678	100	(*)	51	527	(*)	(*)	(*)
Scranton, Pa.	341	(*)	(*)	50	291	(*)	(*)	(*)
Seattle-Everett, Wash.	15,265	1,414	43	3,371	10,074	121	(*)	242
Sherman-Denison, Tex.	226	(*)	(*)	36	190	(*)	(*)	(*)
Shreveport, La.	857	38	(*)	39	756	(*)	(*)	24
Sioux City, Iowa-Nebr.	300	52	(*)	(*)	197	(*)	(*)	51
Sioux Falls, S.D.	215	117	(*)	45	53	(*)	(*)	(*)
South Bend, Ind.	1,145	252	(*)	188	705	(*)	(*)	(*)
Spokane, Wash.	699	154	(*)	118	427	(*)	(*)	(*)
Springfield, Ill.	1,369	155	(*)	260	954	(*)	(*)	(*)
Springfield, Mo.	181	79	(*)	27	75	(*)	(*)	(*)
Springfield, Ohio	127	25	(*)	(*)	102	(*)	(*)	(*)
Springfield-Chicopee Holyoke, Mass.-Conn.	1,814	479	(*)	437	898	(*)	(*)	(*)
Stamford, Conn.	1,737	154	(*)	670	913	(*)	(*)	(*)
Steubenville-Weirton, Ohio-W. Va.	336	24	(*)	32	280	(*)	(*)	(*)
Stockton, Calif.	411	70	(*)	51	290	(*)	(*)	(*)
Syracuse, N.Y.	4,419	643	(*)	1,134	2,631	(*)	(*)	11
Tacoma, Wash.	1,103	190	(*)	220	693	(*)	(*)	(*)
Tallahassee, Fla.	1,006	420	(*)	192	361	(*)	(*)	33
Tampa-St. Petersburg, Fla.	3,883	295	(*)	634	2,789	(*)	(*)	165
Terre Haute, Ind.	700	134	(*)	190	376	(*)	(*)	(*)
Texarkana, Tex.-Ark.	147	(*)	(*)	23	124	(*)	(*)	(*)
Toledo, Ohio-Mich.	2,844	437	23	699	1,521	(*)	(*)	164
Topeka, Kans.	1,167	93	(*)	267	807	(*)	(*)	(*)
Trenton, N.J.	4,455	1,043	(*)	1,576	1,836	(*)	(*)	(*)
Tuscon, Ariz.	2,605	1,072	(*)	423	1,099	11	(*)	(*)
Tulsa, Okla.	3,389	260	(*)	628	2,435	13	(*)	53
Tuscaloosa, Ala.	353	140	(*)	26	187	(*)	(*)	(*)
Tyler, Tex.	363	22	(*)	136	154	(*)	(*)	51
Utica-Rome, N.Y.	2,254	47	(*)	503	1,399	136	(*)	169
Vallejo-Napa, Calif.	928	61	(*)	231	596	(*)	(*)	40
Vineland-Millville-Bridgeton, N.J.	151	28	(*)	38	85	(*)	(*)	(*)
Waco, Tex.	391	54	(*)	79	258	(*)	(*)	(*)
Washington, D.C.-Md.-Va.	47,245	11,538	373	12,656	22,029	115	(*)	534
Waterbury, Conn.	973	160	(*)	90	674	49	(*)	(*)
Waterloo, Iowa	471	126	(*)	65	177	38	(*)	65
West Palm Beach, Fla.	2,369	167	(*)	353	1,849	(*)	(*)	(*)
Wheeling, W. Va.-Ohio	399	35	(*)	132	206	(*)	(*)	26
Wichita, Kans.	2,174	70	(*)	250	1,796	14	(*)	44
Wichita Falls, Tex.	392	26	(*)	13	353	(*)	(*)	(*)
Wilkes Barre-Hazelton, Pa.	560	81	(*)	202	277	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	5,869	2,176	(*)	1,232	2,419	(*)	(*)	42
Wilmington, N.C.	533	97	(*)	56	380	(*)	(*)	(*)
Worcester, Mass.	1,582	222	(*)	354	794	163	(*)	49
York, Pa.	1,086	191	(*)	104	791	(*)	(*)	(*)
Youngstown-Warren, Ohio	1,615	146	(*)	230	1,152	39	(*)	48
Non-SMSA	188,980	39,643	387	38,717	105,573	1,822	13	2,825
Outlying areas	783	136	(*)	77	556	14	(*)	(*)
Foreign	8,966	3,018	(*)	1,660	4,212	51	(*)	25
SMSA not reported	8,594	1,063	13	1,630	5,573	79	(*)	236

*No cases reported.
Note: Data are reported for SMSA of employment or SMSA of residence if not employed.
SOURCE: National Science Foundation, National Sample, 1974.

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974

	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
All areas, total	1,013,086	566,961	134,910	115,440	9,828	9,642	9,433	28,292	99,421	3,172	73,769	19,150	75,677	2,301
SMSA, total	821,280	477,316	93,734	79,103	6,910	7,721	8,177	24,077	78,596	2,612	57,768	15,575	63,318	107
Abilene, Tex.	310	109	87	87	(*)	(*)	(*)	(*)	51	(*)	14	(*)	49	(*)
Akron, Ohio	5,126	3,962	556	468	(*)	88	24	(*)	62	(*)	35	99	388	(*)
Albany, Ga.	195	115	24	24	(*)	(*)	(*)	(*)	(*)	(*)	17	(*)	39	(*)
Albany-Schenectady-Troy, N.Y.	6,719	3,028	1,180	1,005	113	62	52	112	320	(*)	1,097	124	506	(*)
Albuquerque, N.M.	3,585	868	411	338	73	(*)	12	918	589	(*)	274	(*)	513	(*)
Allentown-Bethlehem-Easton, Pa.-N.J.	3,077	2,456	305	241	39	25	27	117	(*)	(*)	66	(*)	106	(*)
Altoona, Pa.	240	164	50	50	(*)	(*)	(*)	(*)	13	(*)	(*)	13	(*)	(*)
Amarillo, Tex.	633	403	106	68	27	11	13	(*)	61	(*)	36	(*)	14	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	11,717	8,906	653	549	35	69	65	80	283	(*)	255	386	1,089	(*)
Anderson, Ind.	638	551	87	87	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Ann Arbor, Mich.	3,820	1,511	1,503	1,465	12	26	60	258	13	(*)	122	62	291	(*)
Asheville, N.C.	408	209	48	48	(*)	(*)	(*)	(*)	37	(*)	84	(*)	30	(*)
Atlanta, Ga.	7,289	4,384	1,049	877	143	29	54	81	694	(*)	590	130	307	(*)
Atlantic City, N.J.	451	219	78	78	(*)	(*)	(*)	(*)	113	(*)	28	(*)	13	(*)
Augusta, Ga.-S.C.	1,404	905	160	160	(*)	(*)	12	(*)	35	(*)	65	(*)	227	(*)
Austin, Tex.	2,624	797	785	674	27	84	(*)	(*)	65	55	657	138	127	(*)
Bakersfield, Calif.	2,149	660	36	12	12	12	(*)	(*)	1,210	41	176	(*)	26	(*)
Baltimore, Md.	10,766	4,802	925	689	138	98	127	338	2,543	180	1,247	35	569	(*)
Baton Rouge, La.	3,152	1,729	682	646	(*)	36	27	119	87	(*)	357	(*)	151	(*)
Bay City, Mich.	275	212	25	13	12	(*)	13	(*)	(*)	(*)	13	12	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	1,964	1,624	135	135	(*)	(*)	(*)	(*)	35	(*)	72	61	37	(*)
Billings, Mont.	562	334	(*)	(*)	(*)	(*)	(*)	(*)	216	(*)	12	(*)	(*)	(*)
Biloxi-Gulfport, Miss.	267	106	(*)	(*)	(*)	(*)	12	(*)	123	14	12	(*)	(*)	(*)
Binghamton, N.Y.-Pa.	2,955	2,205	198	122	76	(*)	14	(*)	(*)	(*)	(*)	279	259	(*)
Birmingham, Ala.	2,716	2,069	173	132	13	28	(*)	136	64	(*)	92	25	157	(*)
Bloomington-Normal, Ill.	389	264	110	97	(*)	13	(*)	(*)	(*)	(*)	15	(*)	(*)	(*)
Boise City, Idaho	683	156	69	55	(*)	14	(*)	38	215	(*)	169	36	(*)	(*)
Boston, Mass.	28,617	16,367	3,922	3,574	125	223	527	1,603	1,919	70	1,378	217	2,614	(*)
Bridgeport, Conn.	2,124	1,817	102	76	(*)	26	13	(*)	(*)	(*)	(*)	13	179	(*)
Brockton, Mass.	490	195	89	89	(*)	(*)	84	(*)	(*)	(*)	36	(*)	86	(*)
Brownsville-Harlingen-San Benito, Tex.	24	12	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	12	(*)	(*)
Buffalo, N.Y.	6,606	3,956	883	785	47	51	128	58	49	(*)	587	116	829	(*)
Canton, Ohio	1,296	839	52	39	(*)	13	(*)	(*)	(*)	(*)	(*)	(*)	405	(*)
Cedar Rapids, Iowa	1,442	1,328	114	114	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Champaign-Urbana, Ill.	2,426	150	1,951	1,703	58	190	37	13	95	(*)	168	(*)	12	(*)

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
Charleston, S.C.	1,017	380	167	153	(*)	14	(*)	(*)	282	74	102	(*)	12	(*)
Charleston, W. Va.	1,735	1,229	44	44	(*)	(*)	(*)	40	86	(*)	192	82	62	(*)
Charlotte, N.C.	1,623	1,294	178	151	27	(*)	(*)	39	(*)	(*)	12	(*)	100	(*)
Chattanooga, Tenn.-Ga.	2,040	1,326	120	120	(*)	(*)	(*)	13	364	(*)	34	12	171	(*)
Chicago, Ill.	34,863	23,108	3,294	2,313	431	550	553	1,865	1,148	(*)	1,295	708	2,892	(*)
Cincinnati, Ohio-Ky.-Ind.	9,161	6,470	561	485	50	26	166	181	521	11	304	462	485	(*)
Cleveland, Ohio	10,948	7,516	994	802	136	56	195	110	1,004	(*)	304	70	755	(*)
Colorado Springs, Colo.	915	374	113	100	(*)	13	(*)	(*)	189	32	66	(*)	141	(*)
Columbia, S.C.	1,474	805	250	250	(*)	(*)	27	48	66	47	137	51	43	(*)
Columbus, Ga.-Ala.	188	(*)	39	39	(*)	(*)	(*)	113	(*)	(*)	36	(*)	(*)	(*)
Columbus, Ohio	6,417	3,585	947	922	13	12	136	510	304	(*)	519	159	257	(*)
Corpus Christi, Tex.	1,205	884	26	13	(*)	13	79	(*)	72	(*)	17	101	26	(*)
Dallas, Tex.	11,964	9,341	922	795	33	94	54	243	297	(*)	188	251	668	(*)
Davenport-Moline-Iowa-Ill.	2,009	920	94	44	38	12	(*)	(*)	764	(*)	13	181	37	(*)
Dayton, Ohio	7,446	3,082	375	274	51	50	(*)	115	2,639	203	406	221	405	(*)
Decatur, Ill.	473	362	80	80	(*)	(*)	14	(*)	(*)	(*)	(*)	(*)	17	(*)
Denver, Colo.	13,022	6,938	1,199	1,141	21	37	81	104	2,280	(*)	988	213	1,219	(*)
Des Moines, Iowa	950	445	154	138	(*)	16	(*)	(*)	149	(*)	189	(*)	13	(*)
Detroit, Mich.	20,406	15,454	1,341	915	136	290	99	136	503	(*)	523	891	1,459	(*)
Dubuque, Iowa	249	202	35	35	(*)	(*)	(*)	(*)	12	(*)	(*)	(*)	(*)	(*)
Duluth-Superior, Minn.-Wis.	974	493	114	114	(*)	(*)	14	(*)	153	(*)	151	(*)	49	(*)
Durham, N.C.	2,329	642	992	924	(*)	68	29	82	217	13	184	34	136	(*)
El Paso, Tex.	782	207	258	192	(*)	66	(*)	(*)	13	(*)	132	(*)	172	(*)
Erie, Pa.	1,307	1,015	239	202	(*)	37	13	(*)	12	(*)	(*)	28	(*)	(*)
Eugene, Oreg.	1,169	752	182	170	12	(*)	74	52	56	(*)	40	(*)	13	(*)
Evansville, Ind.-Ky.	603	400	14	14	(*)	(*)	13	13	12	(*)	31	(*)	120	(*)
Fall River, Mass.-R.I.	86	(*)	86	(*)	86	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fargo-Moorhead, N.D.-Minn.	244	38	146	146	(*)	(*)	(*)	11	37	(*)	12	(*)	(*)	(*)
Fayetteville, N.C.	121	24	26	(*)	26	(*)	(*)	(*)	(*)	(*)	71	(*)	(*)	(*)
Fitchburg-Leominster, Mass.	296	244	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	52	(*)
Flint, Mich.	1,600	1,260	254	169	72	13	(*)	(*)	35	(*)	(*)	51	(*)	(*)
Fort Lauderdale-Hollywood, Fla.	1,063	774	65	39	(*)	26	26	51	12	(*)	109	(*)	26	(*)
Fort Smith, Ark.-Okla.	37	12	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	25	(*)
Fort Wayne, Ind.	1,783	1,471	107	107	(*)	(*)	35	(*)	36	(*)	(*)	90	44	(*)
Fort Worth, Tex.	4,265	2,958	549	393	52	104	(*)	(*)	280	(*)	296	15	167	(*)

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
Fresno, Calif.	1,010	518	176	136	27	13	(*)	(*)	81	(*)	126	96	13	(*)
Gadsen, Ala.	236	159	65	(*)	46	19	(*)	(*)	(*)	(*)	(*)	(*)	12	(*)
Galveston-Texas City, Tex.	816	511	181	181	(*)	(*)	14	(*)	78	(*)	(*)	13	19	(*)
Gary-Hammond-East Chicago, Ind.	1,848	1,576	235	235	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	37	(*)
Grand Rapids, Mich.	1,285	817	277	187	12	78	(*)	(*)	54	(*)	(*)	37	100	(*)
Great Falls, Mont.	205	119	(*)	(*)	(*)	(*)	(*)	(*)	74	(*)	12	(*)	(*)	(*)
Green Bay, Wis.	904	498	44	32	(*)	12	(*)	117	22	(*)	42	(*)	181	(*)
Greensboro, N.C.	2,811	1,890	368	356	12	(*)	(*)	63	11	(*)	(*)	60	419	(*)
Greenville, S.C.	1,440	959	335	335	(*)	(*)	(*)	14	16	(*)	(*)	43	73	(*)
Hamilton-Middletown, Ohio	1,037	782	190	190	(*)	(*)	13	(*)	(*)	(*)	16	(*)	36	(*)
Harrisburg, Pa.	2,381	867	179	152	13	14	182	49	158	(*)	907	(*)	39	(*)
Hartford, Conn.	8,081	6,049	321	202	78	41	102	61	30	(*)	646	205	667	(*)
Honolulu, Hawaii	3,648	1,050	939	839	32	68	16	139	610	53	755	29	57	(*)
Houston, Tex.	19,774	14,496	839	726	46	67	126	79	1,069	(*)	721	860	1,584	(*)
Huntington-Ashland, W. Va.-Ky.-Ohio	712	298	134	134	(*)	(*)	(*)	(*)	194	(*)	13	73	(*)	(*)
Huntsville, Ala.	5,750	1,400	64	64	(*)	(*)	(*)	64	3,217	116	561	12	316	(*)
Indianapolis, Ind.	4,988	3,339	268	255	(*)	13	87	35	249	35	375	74	526	(*)
Jackson, Mich.	1,080	743	161	25	136	(*)	(*)	(*)	(*)	(*)	13	64	99	(*)
Jackson, Miss.	992	460	267	192	75	(*)	13	(*)	65	(*)	173	14	(*)	(*)
Jacksonville, Fla.	1,437	1,042	62	50	12	(*)	(*)	(*)	198	12	96	(*)	27	(*)
Jersey City, N.J.	1,452	877	261	222	26	13	(*)	63	(*)	(*)	70	54	114	13
Johnstown, Pa.	815	514	158	129	12	17	(*)	119	(*)	(*)	24	(*)	(*)	(*)
Kalamazoo, Mich.	1,112	531	242	165	62	15	(*)	(*)	13	(*)	48	(*)	278	(*)
Kansas City, Mo.-Kans.	5,600	3,406	296	242	25	29	150	211	634	(*)	491	100	312	(*)
Kenosha, Wis.	227	24	77	77	(*)	(*)	(*)	(*)	(*)	(*)	36	90	(*)	(*)
Knoxville, Tenn.	4,342	1,337	329	304	(*)	25	14	157	986	(*)	421	12	1,086	(*)
Lafayette, La.	673	488	54	54	(*)	(*)	(*)	(*)	(*)	(*)	65	41	25	(*)
Lafayette-West Lafayette, Ind.	1,589	361	1,154	1,141	(*)	13	(*)	37	12	(*)	25	(*)	(*)	(*)
Lake Charles, La.	633	535	37	37	(*)	(*)	(*)	(*)	(*)	(*)	49	12	(*)	(*)
Lancaster, Pa.	1,358	1,004	132	119	(*)	13	24	(*)	(*)	(*)	(*)	(*)	198	(*)
Lansing, Mich.	2,746	399	1,125	1,041	14	70	(*)	52	117	(*)	951	51	51	(*)
Laredo, Tex.	35	35	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Las Vegas, Nev.	695	378	82	55	27	(*)	(*)	(*)	24	(*)	162	(*)	49	(*)
Lawrence-Haverhill, Mass.-N.H.	1,504	1,299	75	75	(*)	(*)	13	(*)	12	(*)	36	17	52	(*)
Lawton, Okla.	61	13	(*)	(*)	(*)	(*)	(*)	(*)	13	35	(*)	(*)	(*)	(*)

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
Lewiston-Auburn, Maine	126	76	25	25	(*)	(*)	12	(*)	13	(*)	(*)	(*)	(*)	(*)
Lexington, Ky.	1,386	763	481	481	(*)	(*)	13	(*)	68	12	49	(*)	(*)	(*)
Lima, Ohio	337	186	22	22	(*)	(*)	13	(*)	13	(*)	103	(*)	(*)	(*)
Lincoln, Nebr.	1,400	380	543	530	(*)	13	14	(*)	125	(*)	287	(*)	51	(*)
Little Rock-No. Little Rock, Ark.	1,242	549	157	157	(*)	(*)	(*)	53	249	(*)	220	(*)	14	(*)
Lorain-Elyria, Ohio	802	697	105	65	27	13	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Los Angeles-Long Beach, Calif.	51,139	31,988	3,904	3,033	487	384	425	3,509	1,154	(*)	4,599	971	4,572	17
Louisville, Ky.	3,490	2,300	564	536	12	16	15	14	180	(*)	164	47	206	(*)
Lowell, Mass.	654	553	88	88	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13	(*)
Lubbock, Tex.	619	123	331	331	(*)	(*)	(*)	(*)	49	(*)	63	53	(*)	(*)
Lynchburg, Va.	887	679	110	110	(*)	(*)	(*)	(*)	(*)	(*)	62	(*)	36	(*)
Macon, Ga.	714	249	58	46	12	(*)	(*)	(*)	255	141	11	(*)	(*)	(*)
Madison, Wis.	3,744	996	1,694	1,627	55	12	50	79	277	(*)	498	(*)	150	(*)
Manchester, N.H.	284	116	23	23	(*)	(*)	(*)	(*)	(*)	(*)	49	(*)	96	(*)
Mansfield, Ohio	612	535	12	(*)	12	(*)	(*)	(*)	(*)	(*)	(*)	(*)	65	(*)
Mayaguez, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
McAllen-Pharr-Edinburg, Tex.	239	49	114	114	(*)	(*)	(*)	(*)	50	(*)	12	14	(*)	(*)
Memphis, Tenn.-Ark.	1,635	884	331	318	(*)	13	52	78	72	(*)	137	17	64	(*)
Meriden, Conn.	243	243	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Miami, Fla.	3,145	2,045	540	377	110	53	15	121	153	(*)	243	(*)	28	(*)
Midland, Tex.	1,485	1,323	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	51	111	(*)
Milwaukee, Wisc.	5,879	3,643	786	580	40	166	26	36	106	(*)	626	212	444	(*)
Minneapolis-St. Paul, Minn.	15,250	10,235	1,913	1,740	50	123	134	196	386	(*)	660	466	1,260	(*)
Mobile, Ala.	1,079	428	109	109	(*)	(*)	(*)	13	285	35	48	35	126	(*)
Monroe, La.	142	85	46	46	(*)	(*)	(*)	(*)	(*)	(*)	11	(*)	(*)	(*)
Montgomery, Ala.	581	102	15	15	(*)	(*)	(*)	(*)	163	(*)	246	(*)	55	(*)
Muncie, Ind.	607	458	149	149	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Muskegon-Muskegon Heights, Mich.	366	353	13	(*)	(*)	13	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Nashville, Tenn.	2,203	1,167	541	528	(*)	13	(*)	29	137	(*)	266	(*)	63	(*)
New Bedford, Mass.	337	204	133	19	(*)	114	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New Britain, Conn.	331	201	77	77	(*)	(*)	14	(*)	(*)	(*)	(*)	(*)	39	(*)
New Haven, Conn.	2,645	1,467	838	825	(*)	13	(*)	105	87	(*)	37	52	59	(*)
New London-Groton-Norwich, Conn.	2,012	905	261	159	64	38	68	(*)	391	(*)	34	(*)	353	(*)
New Orleans, La.	6,143	3,949	455	444	(*)	11	50	48	574	(*)	209	339	519	(*)
New York, N.Y.	46,941	26,629	6,132	4,728	521	883	1,159	2,443	974	65	4,185	762	4,592	(*)

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
Newark, N.J.	17,769	11,311	837	542	76	219	38	235	1,485	(*)	391	310	3,162	(*)
Newport News-Hampton, Va.	2,971	903	76	(*)	63	13	(*)	(*)	1,532	12	237	(*)	211	(*)
Norfolk-Portsmouth, Va.	1,263	263	303	234	43	26	(*)	(*)	450	27	204	(*)	16	(*)
Norwalk, Conn.	1,035	842	13	(*)	(*)	13	(*)	59	(*)	(*)	(*)	(*)	121	(*)
Odessa, Tex.	301	263	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	13	25	(*)
Ogden, Utah	578	186	51	51	(*)	(*)	(*)	(*)	274	12	43	12	(*)	(*)
Oklahoma City, Okla.	3,322	1,898	451	411	13	27	44	56	528	(*)	193	51	101	(*)
Omaha, Nebr.-Iowa	1,968	1,184	203	178	12	13	27	57	219	69	145	(*)	64	(*)
Orlando, Fla.	4,154	2,418	274	235	12	27	14	(*)	692	(*)	277	68	411	(*)
Oxnard-Ventura, Calif.	2,835	937	102	65	11	26	(*)	(*)	1,210	(*)	358	51	177	(*)
Paterson-Clifton-Passaic, N.J.	6,450	4,853	132	50	30	52	13	13	(*)	(*)	133	258	1,048	(*)
Pensacola, Fla.	902	630	66	43	23	(*)	(*)	(*)	145	(*)	(*)	(*)	61	(*)
Peoria, Ill.	2,523	1,969	75	37	12	26	(*)	(*)	231	(*)	153	83	12	(*)
Philadelphia, Pa.-N.J.	28,820	17,921	2,975	2,615	89	271	427	976	2,821	55	1,277	388	1 040	40
Phoenix, Ariz.	5,852	4,303	403	350	26	27	42	99	286	13	386	88	232	(*)
Pine Bluff, Ark.	210	49	(*)	(*)	(*)	(*)	(*)	(*)	87	36	(*)	(*)	38	(*)
Pittsburgh, Pa.	15,774	10,482	1,289	1,155	35	99	93	254	376	(*)	265	301	2,690	24
Pittsfield, Mass.	957	851	21	(*)	21	(*)	(*)	(*)	(*)	(*)	85	(*)	(*)	(*)
Ponce, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Portland, Maine	600	407	80	24	27	29	(*)	34	64	(*)	(*)	(*)	15	(*)
Portland, Oreg.-Wash.	5,504	2,556	885	753	79	53	78	25	1,032	(*)	467	195	266	(*)
Providence-Warwick-Pawtucket, R.I.-Mass.	2,734	1,300	634	557	38	39	165	26	13	(*)	336	96	164	(*)
Provo-Orem, Utah	406	194	165	165	(*)	(*)	(*)	(*)	35	(*)	12	(*)	(*)	(*)
Pueblo, Colo.	337	110	13	13	(*)	(*)	(*)	(*)	139	(*)	75	(*)	(*)	(*)
Racine, Wis.	494	458	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	11	25	(*)
Raleigh, N.C.	2,525	727	772	772	(*)	(*)	(*)	(*)	90	(*)	795	16	125	(*)
Reading, Pa.	1,735	1,527	114	114	(*)	(*)	(*)	53	11	(*)	17	(*)	13	(*)
Reno, Nev.	536	138	107	94	(*)	13	(*)	(*)	107	(*)	86	(*)	98	(*)
Richmond, Va.	2,984	1,790	250	181	11	58	(*)	90	156	(*)	325	26	347	(*)
Roanoke, Va.	550	287	42	23	19	(*)	13	(*)	35	(*)	121	(*)	52	(*)
Rochester, N.Y.	8,365	6,578	806	700	53	53	58	14	(*)	(*)	153	200	556	(*)
Rockford, Ill.	1,001	943	12	12	(*)	(*)	(*)	(*)	(*)	(*)	46	(*)	(*)	(*)
Sacramento, Calif.	5,656	985	1,066	962	64	40	14	(*)	839	52	2,536	62	102	(*)
Saginaw, Mich.	876	663	16	16	(*)	(*)	(*)	(*)	(*)	(*)	(*)	184	13	(*)
St. Joseph, Mo.	186	175	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	11	(*)

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
St. Louis, Mo.-Ill.	11,889	8,758	1,039	780	188	71	107	89	378	85	437	187	809	(*)
Salem, Oreg.	560	54	36	36	(*)	(*)	(*)	65	69	(*)	290	(*)	46	(*)
Salinas-Monterey, Calif.	814	287	272	134	60	78	(*)	(*)	54	(*)	40	12	149	(*)
Salt Lake City, Utah	4,062	2,154	763	651	(*)	112	27	(*)	645	(*)	224	74	175	(*)
San Angelo, Tex.	333	61	82	82	(*)	(*)	(*)	(*)	(*)	(*)	36	(*)	154	(*)
San Antonio, Tex.	1,902	400	166	147	(*)	19	(*)	157	649	207	194	12	117	(*)
San Bernardino-Riverside-Ontario, Calif.	2,947	1,208	892	633	176	83	27	78	255	(*)	292	(*)	195	(*)
San Diego, Calif.	8,783	4,273	1,450	1,160	199	91	70	164	1,228	142	669	124	663	(*)
San Francisco-Oakland, Calif.	22,831	10,505	3,680	3,052	367	261	150	1,338	1,964	71	2,995	434	1,681	13
San Jose, Calif.	15,538	11,226	1,119	1,020	74	25	96	242	495	14	491	257	1,598	(*)
San Juan, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Santa Barbara, Calif.	2,346	1,040	387	261	52	74	13	17	240	(*)	248	19	382	(*)
Savannah, Ga.	667	481	90	38	(*)	52	(*)	(*)	71	(*)	(*)	13	12	(*)
Scranton, Pa.	341	229	49	49	(*)	(*)	(*)	24	(*)	(*)	39	(*)	(*)	(*)
Seattle-Everett, Wash.	14,489	10,174	1,483	1,332	111	40	51	319	566	25	888	15	968	(*)
Sherman-Denison, Tex.	226	36	12	12	(*)	(*)	(*)	(*)	12	(*)	35	119	12	(*)
Shreveport, La.	805	599	24	24	(*)	(*)	(*)	(*)	23	38	(*)	47	74	(*)
Sioux City, Iowa-Nebr.	300	214	35	35	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	51	(*)
Sioux Falls, S.D.	215	40	150	150	(*)	(*)	(*)	(*)	13	(*)	12	(*)	(*)	(*)
South Bend, Ind.	1,092	722	314	314	(*)	(*)	(*)	12	(*)	(*)	(*)	32	12	(*)
Spokane, Wash.	578	261	117	75	28	14	(*)	(*)	129	(*)	71	(*)	(*)	(*)
Springfield, Ill.	1,310	374	169	157	12	(*)	(*)	36	12	(*)	642	61	16	(*)
Springfield, Mo.	181	39	92	92	(*)	(*)	(*)	(*)	(*)	(*)	50	(*)	(*)	(*)
Springfield, Ohio	76	24	39	39	(*)	(*)	(*)	(*)	(*)	(*)	13	(*)	(*)	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	1,611	1,147	325	203	97	25	29	(*)	53	(*)	(*)	17	40	(*)
Stamford, Conn.	1,726	1,190	25	(*)	(*)	25	13	(*)	13	(*)	(*)	28	457	(*)
Steubenville-Weirton, Ohio-W.Va.	324	304	20	20	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Stockton, Calif.	411	166	125	57	26	42	12	(*)	25	(*)	36	(*)	47	(*)
Syracuse, N.Y.	4,281	2,475	776	637	71	68	72	250	13	(*)	185	105	405	(*)
Tacoma, Wash.	1,034	405	84	84	(*)	(*)	51	97	28	(*)	124	62	183	(*)
Tallahassee, Fla.	926	83	363	363	(*)	(*)	13	19	26	(*)	422	(*)	(*)	(*)
Tampa-St. Petersburg, Fla.	3,392	2,370	379	301	78	(*)	(*)	27	143	(*)	181	58	234	(*)
Terre Haute, Ind.	700	447	186	173	(*)	13	(*)	(*)	54	(*)	(*)	(*)	13	(*)
Texarkana, Tex.-Ark.	83	48	11	11	(*)	(*)	(*)	13	11	(*)	(*)	(*)	(*)	(*)
Toledo, Ohio-Mich.	2,599	1,848	521	393	68	60	(*)	(*)	(*)	(*)	(*)	(*)	230	(*)

Table B-6. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Total	Business & industry	Educational Institutions				Hospital/ clinics	Nonprofit organizations	Federal Government	Military	State & local government	Other government	Other	Not reported
			Total	4-year colleges or universities	2-year colleges	Other								
Topeka, Kans.	1,079	497	12	12	(*)	(*)	29	64	13	(*)	416	35	13	(*)
Trenton, N.J.	4,141	2,013	504	409	52	43	54	103	236	(*)	491	46	694	(*)
Tuscon, Ariz.	2,277	857	1,100	1,100	(*)	(*)	(*)	126	65	(*)	92	12	25	(*)
Tulsa, Okla.	3,179	2,413	91	91	(*)	(*)	13	(*)	118	(*)	79	203	262	(*)
Tuscaloosa, Ala.	353	88	168	168	(*)	(*)	66	(*)	(*)	(*)	14	(*)	17	(*)
Tyler, Tex.	347	299	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	36	(*)	12	(*)
Utica-Rome, N.Y.	2,191	1,126	137	99	24	14	(*)	(*)	430	(*)	173	(*)	325	(*)
Vallejo-Napa, Calif.	850	275	60	(*)	12	48	(*)	36	280	(*)	199	(*)	(*)	(*)
Vineland-Millville-Bridgeton, N.J.	115	37	40	27	(*)	13	(*)	(*)	(*)	(*)	(*)	38	(*)	(*)
Waco, Tex.	391	155	132	67	(*)	65	(*)	(*)	(*)	(*)	49	12	43	(*)
Washington, D.C.-Md.-Va.	44,159	7,745	2,408	2,053	163	192	319	3,096	23,111	474	4,076	494	2,436	(*)
Waterbury, Conn.	917	880	(*)	(*)	(*)	(*)	(*)	12	(*)	(*)	(*)	(*)	25	(*)
Waterloo, Iowa	431	288	122	122	(*)	(*)	(*)	21	(*)	(*)	(*)	(*)	(*)	(*)
West Palm Beach, Fla.	1,899	1,625	62	62	(*)	(*)	(*)	(*)	11	(*)	66	94	41	(*)
Wheeling, W.Va.-Ohio	292	198	60	60	(*)	(*)	(*)	(*)	(*)	(*)	34	(*)	(*)	(*)
Wichita, Kans.	2,144	1,686	70	32	12	26	39	(*)	64	(*)	23	84	178	(*)
Wichita Falls, Tex.	379	202	26	26	(*)	(*)	(*)	(*)	(*)	36	34	(*)	81	(*)
Wilkes Barre-Hazelton, Pa.	547	403	132	120	12	(*)	12	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	5,495	4,805	308	259	24	25	28	40	12	(*)	12	(*)	290	(*)
Wilmington, N.C.	482	293	57	44	13	(*)	(*)	(*)	85	(*)	47	(*)	(*)	(*)
Worcester, Mass.	1,566	999	234	167	55	12	38	60	12	(*)	134	(*)	89	(*)
York, Pa.	1,047	885	105	105	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	57	(*)
Youngstown-Warren, Ohio	1,575	1,053	188	175	(*)	13	99	(*)	(*)	(*)	85	114	36	(*)
Non-SMSA	173,989	81,784	38,356	33,793	2,890	1,673	1,178	3,739	19,058	451	15,045	2,819	11,535	24
Outlying Areas	769	497	25	12	(*)	13	(*)	107	77	(*)	36	13	14	(*)
Foreign	8,454	3,052	2,268	2,101	15	152	41	280	1,079	53	520	671	490	(*)
SMSA not reported	8,594	4,312	527	431	13	83	37	89	611	56	400	72	320	2,170

*No cases reported.
SOURCE: National Science Foundation, National Sample, 1974.

Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D					
All areas, total	1,013,086	307,776	41,229	53,926	207,621	276,519	102,707	173,812	84,599	68,332	128,150	133,724	18,986
SMSA, total	821,280	253,962	32,712	43,884	177,366	224,405	88,204	136,201	58,136	56,242	101,351	114,932	12,252
Abilene, Tex.	310	51	(*)	(*)	51	64	(*)	64	38	122	(*)	35	(*)
Akron, Ohio	5,126	1,959	126	400	1,433	1,247	366	881	363	179	791	448	139
Albany, Ga.	195	(*)	(*)	(*)	(*)	53	(*)	53	12	12	118	(*)	(*)
Albany-Schenectady-Troy, N.Y.	6,719	2,296	466	450	1,380	1,657	570	1,087	835	416	682	765	68
Albuquerque, N.M.	3,585	1,856	252	413	1,191	579	259	320	381	178	120	434	37
Allentown-Bethlehem-Easton, Pa.-N.J.	3,077	1,070	13	215	842	803	140	663	219	217	384	331	53
Altoona, Pa.	240	151	(*)	26	125	51	12	39	13	25	(*)	(*)	(*)
Amarillo, Tex.	633	25	(*)	25	(*)	226	(*)	226	106	51	153	72	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	11,717	4,272	76	541	3,655	3,017	1,668	1,349	451	743	1,080	1,895	259
Anderson, Ind.	638	338	(*)	(*)	338	114	62	52	87	(*)	84	15	(*)
Ann Arbor, Mich.	3,820	1,020	341	141	538	888	548	340	944	243	256	380	89
Asheville, N.C.	408	78	(*)	30	48	160	105	55	48	36	38	37	11
Atlanta, Ga.	7,289	1,922	218	341	1,363	1,538	566	972	650	576	969	1,406	228
Atlantic City, N.J.	451	114	82	14	18	172	67	105	72	13	(*)	80	(*)
Augusta, Ga.-S.C.	1,404	464	48	40	376	497	108	389	104	36	262	41	(*)
Austin, Tex.	2,624	723	138	210	375	902	403	494	338	223	102	294	42
Bakersfield, Calif.	2,149	812	74	128	610	442	233	209	36	226	122	447	64
Baltimore, Md.	10,766	3,354	340	685	2,329	2,745	1,372	1,373	543	873	1,122	2,104	25
Baton Rouge, La.	3,152	979	177	251	551	924	141	783	231	282	209	515	12
Bay City, Mich.	275	112	(*)	(*)	112	50	13	37	13	48	40	(*)	12
Beaumont-Port Arthur-Orange, Tex.	1,964	559	12	24	523	559	180	379	129	129	466	122	(*)
Billings, Mont.	562	60	(*)	12	48	200	(*)	200	(*)	136	126	40	(*)
Biloxi-Gulfport, Miss.	267	64	52	12	(*)	60	47	13	14	65	53	11	(*)
Binghamton, N.Y.-Pa.	2,955	922	38	82	802	723	290	433	149	114	394	616	37
Birmingham, Ala.	2,716	840	76	27	737	619	29	590	122	161	668	282	24
Bloomington-Normal, Ill.	389	30	(*)	17	13	35	(*)	35	84	26	129	85	(*)
Boise City, Idaho	683	181	(*)	24	157	137	52	85	69	60	149	87	(*)
Boston, Mass.	28,617	9,492	1,974	1,832	5,686	8,275	3,943	4,332	1,682	2,040	3,165	3,443	520
Bridgeport, Conn.	2,124	541	(*)	14	527	639	317	322	89	145	487	223	(*)
Brockton, Mass.	490	191	86	(*)	105	101	14	87	89	58	51	(*)	(*)
Brownsville-Harlingen-San Benito, Tex.	24	12	(*)	(*)	12	(*)	(*)	(*)	(*)	(*)	(*)	12	(*)
Buffalo, N.Y.	6,606	2,307	107	404	1,796	1,818	491	1,327	520	282	787	652	240
Canton, Ohio	1,296	554	(*)	132	422	187	98	89	52	(*)	417	86	(*)
Cedar Rapids, Iowa	1,442	687	(*)	52	635	363	194	169	114	(*)	261	17	(*)
Champaign-Urbana, Ill.	2,426	631	335	220	76	498	229	269	927	154	43	173	(*)

Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D					
Charleston, S.C.	1,017	126	50	52	24	473	24	449	100	65	136	117	(*)
Charleston, W.Va.	1,735	530	61	(*)	469	500	66	434	11	65	218	398	13
Charlotte, N.C.	1,623	321	13	11	297	487	146	341	141	24	394	256	(*)
Chattanooga, Tenn.-Ga.	2,040	428	(*)	15	413	648	154	494	120	72	594	144	34
Chicago, Ill.	34,863	10,492	1,586	1,617	7,289	9,098	3,794	5,304	2,340	2,496	5,163	4,842	432
Cincinnati, Ohio-Ky.-Ind.	9, 61	2,598	273	377	1,948	3,308	1,454	1,854	515	437	1,363	898	42
Cleveland, Ohio	10,948	3,725	484	802	2,439	2,881	1,132	1,749	760	750	1,319	1,299	214
Colorado Springs, Colo.	915	197	(*)	42	155	353	16	337	48	58	37	222	(*)
Columbia, S.C.	1,474	337	79	(*)	258	492	109	383	154	88	198	205	(*)
Columbus, Ga.-Ala.	188	(*)	(*)	(*)	(*)	84	12	72	39	(*)	(*)	65	(*)
Columbus, Ohio	6,417	1,580	220	294	1,066	2,295	672	1,623	636	341	761	752	52
Corpus Christi, Tex.	1,205	500	24	37	439	235	13	222	41	142	218	43	26
Dallas, Tex.	11,964	2,832	201	426	2,205	3,432	960	2,472	500	1,291	1,349	2,234	326
Davenport-Moline, Iowa-Ill.	2,009	439	(*)	12	427	746	339	407	119	120	256	329	(*)
Dayton, Ohio	7,446	2,519	63	848	1,608	2,310	1,179	1,131	298	387	979	796	157
Decatur, Ill.	473	130	(*)	39	91	207	100	107	80	(*)	25	31	(*)
Denver, Colo.	13,022	4,078	474	934	2,670	3,717	1,398	2,319	748	1,045	1,471	1,840	123
Des Moines, Iowa	950	283	(*)	48	235	190	92	98	115	16	124	222	(*)
Detroit, Mich.	20,406	7,065	294	970	5,801	6,314	3,026	3,288	831	1,072	2,360	2,583	181
Dubuque, Iowa	249	89	(*)	(*)	89	(*)	(*)	(*)	35	36	41	(*)	48
Duluth-Superior, Minn.-Wis.	974	278	11	36	231	321	48	273	114	11	99	151	(*)
Durham, N.C.	2,329	791	290	241	260	414	216	198	525	140	178	281	(*)
El Paso, Tex.	782	305	(*)	77	228	76	25	51	233	(*)	120	48	(*)
Erie, Pa.	1,307	401	(*)	(*)	401	422	158	264	183	62	206	14	19
Eugene, Oreg.	1,169	152	101	(*)	51	286	104	182	119	123	342	147	(*)
Evansville, Ind.-Ky.	603	202	65	14	123	138	76	62	14	89	72	75	13
Fall River, Mass.-R.I.	86	(*)	(*)	(*)	(*)	12	(*)	12	74	(*)	(*)	(*)	(*)
Fargo-Moorhead, N.D.-Minn.	244	73	24	49	(*)	46	23	23	74	13	14	24	(*)
Fayetteville, N.C.	121	(*)	(*)	(*)	(*)	95	36	59	26	(*)	(*)	(*)	(*)
Fitchburg-Leominister, Mass.	296	100	(*)	(*)	100	40	(*)	40	(*)	130	26	(*)	(*)
Flint, Mich.	1,600	362	(*)	(*)	362	615	113	502	130	54	353	37	49
Fort Lauderdale-Hollywood, Fla.	1,063	291	(*)	(*)	291	358	54	304	(*)	58	115	203	38
Fort Smith, Ark.-Okla.	37	12	(*)	(*)	12	(*)	(*)	(*)	(*)	(*)	25	(*)	(*)
Fort Wayne, Ind.	1,783	675	(*)	(*)	675	510	274	236	51	135	326	86	(*)
Fort Worth, Tex.	4,265	1,370	27	178	1,165	999	406	593	319	180	493	713	191

Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D					
Fresno, Calif.	1,010	271	12	49	210	428	20	408	111	93	83	24	(*)
Gadsen, Ala.	236	(*)	(*)	(*)	(*)	160	109	51	65	(*)	11	(*)	(*)
Galveston-Texas City, Tex.	816	286	146	(*)	140	242	72	170	51	49	138	36	14
Gary-Hammond-East Chicago, Ind.	1,848	395	13	79	303	707	153	554	130	52	393	171	(*)
Grand Rapids, Mich.	1,285	243	(*)	92	151	359	87	272	227	26	248	145	37
Great Falls, Mont.	205	156	(*)	(*)	156	12	(*)	12	(*)	(*)	(*)	37	(*)
Green Bay, Wis.	904	116	(*)	(*)	116	366	73	293	44	64	168	134	12
Greensboro, N.C.	2,811	487	37	55	395	829	120	709	301	71	233	890	(*)
Greenville, S.C.	1,440	406	17	53	336	382	98	284	237	106	115	194	(*)
Hamilton-Middletown, Ohio	1,037	246	25	38	183	98	12	86	207	76	161	133	116
Harrisburg, Pa.	2,381	505	76	57	372	687	87	600	104	237	184	619	45
Hartford, Conn.	8,081	3,070	67	565	2,438	2,142	952	1,190	276	437	908	1,233	15
Honolulu, Hawaii	3,648	855	386	128	341	632	277	355	375	499	683	530	74
Houston, Tex.	19,774	5,022	445	1,100	3,477	6,185	1,626	4,559	501	1,711	2,703	3,182	470
Huntington-Ashland, W.Va.-Ky.-Ohio	712	212	(*)	25	187	218	33	185	107	45	34	96	(*)
Huntsville, Ala.	5,750	1,805	155	366	1,284	2,105	1,510	595	100	207	380	1,153	(*)
Indianapolis, Ind.	4,988	1,775	236	230	1,309	1,037	417	620	205	214	1,025	685	47
Jackson, Mich.	1,080	214	(*)	12	202	330	(*)	330	52	26	273	133	52
Jackson, Miss.	992	194	98	12	84	214	39	175	211	143	116	114	(*)
Jacksonville, Fla.	1,437	222	(*)	70	152	370	29	341	62	141	462	180	(*)
Jersey City, N.J.	1,452	175	26	13	136	491	66	425	165	25	489	69	38
Johnstown, Pa.	815	25	(*)	(*)	25	162	(*)	162	128	54	206	240	(*)
Kalamazoo, Mich.	1,112	407	80	130	197	236	77	159	153	36	84	196	(*)
Kansas City, Mo.-Kans.	5,600	1,621	123	136	1,362	1,275	333	942	209	384	1,195	746	170
Kenosha, Wis.	227	89	(*)	53	36	37	(*)	37	77	(*)	24	(*)	(*)
Knoxville, Tenn.	4,342	1,496	313	198	985	1,209	487	722	255	202	450	681	49
Lafayette, La.	673	100	(*)	48	52	128	38	90	42	42	258	42	61
Lafayette-West Lafayette, Ind.	1,589	452	297	94	61	332	56	276	506	61	137	101	(*)
Lake Charles, La.	633	114	(*)	(*)	114	150	13	137	24	61	247	37	(*)
Lancaster, Pa.	1,358	570	(*)	(*)	570	167	25	142	112	209	139	137	24
Lansing, Mich.	2,746	807	162	277	368	539	279	260	588	278	201	284	49
Laredo, Tex.	35	(*)	(*)	(*)	(*)	35	(*)	35	(*)	(*)	(*)	(*)	(*)
Las Vegas, Nev.	695	176	(*)	38	138	214	107	107	69	13	64	159	(*)
Lawrence-Haverhill, Mass.-N.H.	1,504	778	(*)	(*)	778	99	13	86	86	69	272	188	12
Lawton, Okla.	61	13	(*)	(*)	13	35	(*)	35	(*)	(*)	13	(*)	(*)

Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D					
Lewiston-Auburn, Maine	126	(*)	(*)	(*)	(*)	49	(*)	49	25	(*)	40	12	(*)
Lexington, Ky.	1,386	524	48	162	314	353	67	286	193	93	49	161	13
Lima, Ohio	337	48	(*)	(*)	48	91	37	54	22	13	12	139	12
Lincoln, Nebr.	1,400	303	68	106	129	393	60	333	395	12	138	124	35
Little Rock-No. Little Rock, Ark.	1,242	209	25	33	151	398	190	208	102	66	212	255	(*)
Lorain-Elyria, Ohio	802	295	(*)	128	167	232	52	180	92	25	122	36	(*)
Los Angeles-Long Beach, Calif.	51,139	17,332	1,278	2,328	13,726	13,359	5,896	7,463	2,538	3,230	5,926	7,921	833
Louisville, Ky.	3,490	700	37	85	578	1,179	225	954	318	176	785	332	(*)
Lowell, Mass.	654	106	(*)	(*)	106	179	116	63	52	(*)	164	153	(*)
Lubbock, Tex.	619	111	(*)	12	99	24	10	14	258	49	75	102	(*)
Lynchburg, Va.	887	359	(*)	25	334	318	117	201	110	(*)	(*)	100	(*)
Macon, Ga.	714	279	(*)	(*)	279	161	(*)	161	58	(*)	157	59	(*)
Madison, Wis.	3,744	1,094	710	175	209	997	424	573	772	176	432	206	67
Manchester, N.H.	284	189	(*)	73	116	48	12	36	23	24	(*)	(*)	(*)
Mansfield, Ohio	612	185	(*)	(*)	185	144	(*)	144	12	65	106	52	48
Mayaguez, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
McAllen-Pharr-Edinburg, Tex.	239	121	(*)	109	12	14	(*)	14	67	(*)	(*)	37	(*)
Memphis, Tenn.-Ark.	1,635	339	77	52	210	586	132	454	180	158	243	104	25
Meriden, Conn.	243	47	(*)	(*)	47	(*)	(*)	(*)	(*)	(*)	196	(*)	(*)
Miami, Fla.	3,145	813	227	60	526	889	143	746	307	349	431	272	84
Midland, Tex.	1,485	285	36	73	176	294	37	257	(*)	114	480	249	63
Milwaukee, Wisc.	5,879	1,635	60	24	1,551	1,633	620	1,013	575	351	1,087	569	29
Minneapolis-St. Paul, Minn.	15,250	4,750	542	611	3,597	3,571	1,074	2,497	1,127	1,225	2,453	1,689	435
Mobile, Ala.	1,079	222	12	51	159	510	87	423	96	38	25	188	(*)
Monroe, La.	142	49	(*)	12	37	24	11	13	46	(*)	12	11	(*)
Montgomery, Ala.	581	75	(*)	26	49	140	(*)	140	28	(*)	145	193	(*)
Muncie, Ind.	607	88	(*)	(*)	88	145	(*)	145	135	64	175	(*)	(*)
Muskegon-Muskegon Heights, Mich.	366	127	(*)	(*)	127	162	64	98	(*)	(*)	24	53	(*)
Nashville, Tenn.	2,203	564	80	142	342	634	72	562	378	169	156	290	12
New Bedford, Mass.	337	24	(*)	(*)	24	12	(*)	12	93	156	52	(*)	(*)
New Britain, Conn.	331	90	(*)	(*)	90	87	(*)	87	65	14	36	39	(*)
New Haven, Conn.	2,645	1,173	379	171	623	534	321	213	255	101	260	252	70
New London-Groton-Norwich, Conn.	2,012	697	117	171	409	769	90	679	176	(*)	200	170	(*)
New Orleans, La.	6,143	1,684	268	347	1,069	1,660	317	1,343	239	631	1,140	690	99
New York, N.Y.	46,941	11,721	2,618	1,941	7,162	13,260	4,422	8,838	3,444	4,797	4,813	7,931	975

Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D					
Newark, N.J.	17,769	6,378	1,028	1,064	4,286	4,771	1,940	2,831	760	1,088	1,832	2,645	295
Newport News-Hampton, Va.	2,971	1,186	160	475	551	886	625	261	39	114	245	453	48
Norfolk-Portsmouth, Va.	1,263	287	20	13	254	364	(*)	364	236	50	177	133	16
Norwalk, Conn.	1,035	435	60	(*)	375	201	52	149	(*)	100	224	75	(*)
Odessa, Tex.	301	86	(*)	(*)	86	51	12	39	(*)	12	139	13	(*)
Ogden, Utah	578	59	(*)	(*)	59	185	40	145	39	69	101	125	(*)
Oklahoma City, Okla.	3,322	771	169	115	487	750	314	436	320	203	601	626	51
Omaha, Nebr.-Iowa	1,968	431	77	(*)	354	387	101	286	124	206	322	482	16
Orlando, Fla.	4,154	1,367	13	78	1,276	1,231	825	406	261	179	583	533	(*)
Oxnard-Ventura, Calif.	2,835	683	11	181	491	1,046	539	507	192	71	266	473	104
Paterson-Clifton-Passaic, N.J.	6,450	1,772	12	231	1,529	2,174	733	1,441	115	687	769	495	438
Pensacola, Fla.	902	251	(*)	36	215	357	149	208	66	29	41	158	(*)
Peoria, Ill.	2,523	1,029	135	207	687	710	329	381	75	143	371	195	(*)
Philadelphia, Pa.-N.J.	28,820	10,644	1,204	1,943	7,497	7,612	3,550	4,062	1,773	1,456	3,878	3,178	279
Phoenix, Ariz.	5,852	2,051	61	105	1,885	1,615	850	765	284	334	762	698	108
Pine Bluff, Ark.	210	36	(*)	(*)	36	13	13	(*)	(*)	(*)	148	13	(*)
Pittsburgh, Pa.	15,774	5,110	226	1,005	3,879	3,829	1,622	2,207	817	1,119	2,621	2,001	277
Pittsfield, Mass.	957	453	51	(*)	402	328	53	275	21	26	24	105	(*)
Ponce, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Portland, Maine	600	122	(*)	(*)	122	146	(*)	146	85	104	35	108	(*)
Portland, Oreg.-Wash.	5,504	1,227	137	63	1,027	1,734	393	1,341	652	193	922	728	48
Providence-Warwick-Pawtucket, R.I.-Mass.	2,734	714	70	63	581	890	124	766	427	201	151	291	60
Provo-Orem, Utah	406	36	(*)	(*)	36	107	(*)	107	100	59	63	41	(*)
Pueblo, Colo.	337	(*)	(*)	(*)	(*)	97	(*)	97	13	27	142	58	(*)
Racine, Wis.	494	148	37	(*)	111	76	63	13	(*)	(*)	91	168	11
Raleigh, N.C.	2,525	677	114	162	401	639	186	453	477	62	371	252	47
Reading, Pa.	1,735	476	(*)	24	452	510	261	249	114	165	165	292	13
Reno, Nev.	536	197	71	12	114	156	49	107	58	73	37	15	(*)
Richmond, Va.	2,984	825	24	192	609	983	188	795	162	203	302	497	12
Roanoke, Va.	550	87	(*)	(*)	87	175	(*)	175	140	78	(*)	70	(*)
Rochester, N.Y.	8,365	3,604	408	498	2,698	1,853	1,117	736	623	411	1,022	819	33
Rockford, Ill.	1,001	444	(*)	(*)	444	222	128	94	12	(*)	155	168	(*)
Sacramento, Calif.	5,656	1,312	220	300	792	1,277	379	898	531	602	491	1,407	36
Saginaw, Mich.	876	230	(*)	(*)	230	466	(*)	466	16	(*)	(*)	164	(*)
St. Joseph, Mo.	186	102	(*)	(*)	102	46	11	35	(*)	(*)	38	(*)	(*)

Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Or R&D	Of other than R&D					
St. Louis, Mo.-Ill.	11,889	3,364	344	342	2,678	3,641	1,417	2,224	612	642	1,854	1,710	66
Salem, Oreg.	560	29	(*)	29	(*)	179	46	133	36	114	25	177	(*)
Salinas-Monterey, Calif.	814	133	(*)	35	98	149	29	120	233	96	88	98	17
Salt Lake City, Utah	4,062	1,722	317	206	1,199	889	362	527	245	381	354	459	12
San Angelo, Tex.	333	(*)	(*)	(*)	(*)	87	13	74	82	(*)	48	116	(*)
San Antonio, Tex.	1,902	426	50	94	282	503	170	333	122	297	209	333	12
San Bernardino-Riverside-Ontario, Calif.	2,947	727	325	82	320	865	305	560	436	266	249	392	12
San Diego, Calif.	8,783	3,728	710	533	2,485	1,726	1,211	515	618	707	669	1,208	127
San Francisco-Oakland, Calif.	22,831	8,245	2,076	1,674	4,495	5,597	1,500	4,097	1,550	1,757	2,297	3,158	227
San Jose, Calif.	15,538	6,442	810	865	4,767	3,620	1,749	1,871	632	588	1,679	2,440	137
San Juan, P.R.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Santa Barbara, Calif.	2,346	745	35	146	564	308	223	85	251	276	342	411	13
Savannah, Ga.	667	174	64	(*)	110	152	(*)	152	38	26	108	169	(*)
Scranton, Pa.	341	108	(*)	(*)	108	114	(*)	114	49	53	(*)	17	(*)
Seattle-Everett, Wash.	14,489	5,795	400	729	4,666	3,671	1,597	2,074	758	607	1,639	1,909	110
Sherman-Denison, Tex.	226	12	(*)	12	(*)	12	12	(*)	12	(*)	178	(*)	12
Shreveport, La.	805	163	(*)	24	139	230	119	111	24	37	162	116	73
Sioux City, Iowa-Nebr.	300	99	(*)	(*)	99	12	12	(*)	35	53	51	50	(*)
Sioux Falls, S.D.	215	40	(*)	(*)	40	13	(*)	13	150	12	(*)	(*)	(*)
South Bend, Ind.	1,092	452	71	36	345	81	28	53	244	75	79	125	36
Spokane, Wash.	578	11	(*)	11	(*)	229	193	36	122	12	137	67	(*)
Springfield, Ill.	1,310	162	51	(*)	111	443	147	296	98	226	161	220	(*)
Springfield, Mo.	181	36	(*)	(*)	36	39	(*)	39	106	(*)	(*)	(*)	(*)
Springfield, Ohio	76	(*)	(*)	(*)	(*)	(*)	(*)	(*)	39	(*)	(*)	37	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	1,611	492	24	133	335	548	214	334	289	108	108	66	(*)
Stamford, Conn.	1,726	483	(*)	93	390	633	323	310	43	76	251	240	(*)
Steubenville-Weirton, Ohio-W.Va.	324	25	(*)	(*)	25	110	28	82	(*)	(*)	156	33	(*)
Stockton, Calif.	411	101	(*)	36	65	46	(*)	46	62	89	97	16	(*)
Syracuse, N.Y.	4,281	1,427	147	410	870	837	183	654	688	229	535	541	24
Tacoma, Wash.	1,034	267	(*)	93	174	85	24	61	85	246	184	155	12
Tallahassee, Fla.	926	148	44	(*)	104	133	37	96	225	214	62	144	(*)
Tampa-St. Petersburg, Fla.	3,392	647	74	40	533	1,102	438	664	227	205	646	422	143
Terre Haute, Ind.	700	13	(*)	(*)	13	286	58	228	111	25	103	55	107
Texarkana, Tex.-Ark.	83	(*)	(*)	(*)	(*)	48	48	(*)	11	13	11	(*)	(*)
Toledo, Ohio-Mich.	2,599	893	23	189	681	661	98	563	421	47	312	180	85

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Table B-7. Number of employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Total	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities	No report
		Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D					
Topeka, Kans.	1,079	117	(*)	12	105	373	77	296	28	157	171	233	(*)
Trenton, N.J.	4,141	1,633	145	485	1,003	1,143	684	459	205	188	343	471	158
Tucson, Ariz.	2,277	794	340	277	177	401	121	280	459	51	270	291	11
Tulsa, Okla.	3,179	1,090	77	174	839	899	146	753	81	261	229	619	(*)
Tuscaloosa, Ala.	353	55	13	42	(*)	114	14	100	61	25	41	46	11
Tyler, Tex.	347	169	(*)	12	157	25	13	12	(*)	10	143	(*)	(*)
Utica-Rome, N.Y.	2,191	738	(*)	12	726	947	631	316	71	79	258	98	(*)
Vallejo-Napa, Calif.	850	112	(*)	(*)	112	325	153	172	60	29	181	143	(*)
Vineland-Millville-Bridgeton, N.J.	115	12	12	(*)	(*)	75	37	38	15	13	(*)	(*)	(*)
Waco, Tex.	391	78	66	(*)	12	112	(*)	112	67	78	56	(*)	(*)
Washington, D.C.-Md.-Va.	44,159	10,953	2,974	4,413	3,566	15,018	9,291	5,727	1,718	3,695	2,247	9,815	713
Waterbury, Conn.	917	422	(*)	108	314	165	113	52	(*)	152	86	55	37
Waterloo, Iowa	431	227	(*)	65	162	(*)	(*)	(*)	141	(*)	25	38	(*)
West Palm Beach, Fla.	1,899	855	26	102	727	487	276	211	38	63	159	231	66
Wheeling, W.Va.-Ohio	292	23	(*)	(*)	23	148	26	122	60	(*)	37	24	(*)
Wichita, Kans.	2,144	742	112	37	593	712	148	564	43	173	245	189	40
Wichita Falls, Tex.	379	48	(*)	(*)	48	126	35	91	26	105	49	13	12
Wilkes Barre-Hazelton, Pa.	547	74	(*)	(*)	74	169	(*)	169	95	25	109	75	(*)
Wilmington, Del.-N.J.-Md.	5,495	2,704	335	802	1,567	1,253	486	767	263	256	431	514	74
Wilmington, N.C.	482	119	(*)	(*)	119	68	12	56	38	35	184	38	(*)
Worcester, Mass.	1,566	499	72	(*)	427	372	90	282	223	13	233	155	71
York, Pa.	1,047	440	(*)	(*)	440	193	51	142	105	50	210	49	(*)
Youngstown-Warren, Ohio	1,575	230	(*)	48	182	438	25	413	175	147	415	131	39
Non-SMSA	173,989	44,672	7,148	9,514	28,010	49,040	13,645	35,395	24,994	10,287	24,991	16,957	3,048
Outlying Areas	769	159	13	12	134	224	(*)	224	12	86	223	65	(*)
Foreign	8,454	2,188	1,053	304	831	1,849	542	1,307	1,186	1,135	665	1,281	150
SMSA not reported	8,594	1,795	303	212	1,280	1,001	316	685	271	582	920	489	3,536

*No cases reported
SOURCE: National Science Foundation, National Sample, 1974.

Table B-8. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA): 1974

Location	Salary
All areas, Total	$19,300
SMSA, Total	19,600
Abilene, Tex.	(*)
Akron, Ohio	18,300
Albany, Ga.	(*)
Albany-Schenectady-Troy, N.Y.	20,100
Albuquerque, N.M.	20,300
Allentown-Bethlehem-Easton, Pa.-N.J.	19,700
Altoona, Pa.	(*)
Amarillo, Tex.	18,300
Anaheim-Santa Ana-Garden Grove, Calif.	19,800
Anderson, Ind.	(*)
Ann Arbor, Mich.	21,100
Asheville, N.C.	(*)
Atlanta, Ga.	18,400
Atlantic City, N.J.	(*)
Augusta, Ga.-S.C.	20,100
Austin, Tex.	16,900
Bakersfield, Calif.	20,400
Baltimore, Md.	20,000
Baton Rouge, La.	18,000
Bay City, Mich.	(*)
Beaumont-Port Arthur-Orange, Tex.	19,200
Billings, Mont.	(*)
Biloxi-Gulfport, Miss.	(*)
Binghamton, N.Y.-Pa.	19,300
Birmingham, Ala.	18,500
Bloomington-Normal, Ill.	(*)
Boise City, Idaho	17,100
Boston, Mass.	20,400
Bridgeport, Conn.	20,200
Brockton, Mass.	(*)
Brownsville-Harlingen-San Benito, Tex.	(*)
Buffalo, N.Y.	18,600
Canton, Ohio	17,000
Cedar Rapids, Iowa	17,300
Champaign-Urbana, Ill.	22,400
Charleston, S.C.	20,200
Charleston, W. Va.	18,100
Charlotte, N.C.	17,600
Chattanooga, Tenn.-Ga.	18,900
Chicago, Ill.	19,300
Cincinnati, Ohio-Ky.-Ind.	$19,200
Cleveland, Ohio	18,600
Colorado Springs, Colo.	20,200
Columbia, S.C.	18,900
Columbus, Ga.-Ala.	(*)
Columbus, Ohio	18,900
Corpus Christi, Tex.	16,300
Dallas, Tex.	19,200
Davenport-Moline, Iowa-Ill.	21,200
Dayton, Ohio	20,000
Decatur, Ill.	(*)
Denver, Colo.	19,600
Des Moines, Iowa	16,000
Detroit, Mich.	20,300
Dubuque, Iowa	(*)
Duluth-Superior, Minn.-Wis.	20,400
Durham, N.C.	20,500
El Paso, Tex.	17,100
Erie, Pa.	18,000
Eugene, Oreg.	21,700
Evansville, Ind.-Ky.	18,400
Fall River, Mass.-R.I.	(*)
Fargo-Moorhead, N.D.-Minn.	(*)
Fayetteville, N.C.	(*)
Fitchburg-Leominister, Mass.	(*)
Flint, Mich.	19,100
Fort Lauderdale-Hollywood, Fla.	17,300
Fort Smith, Ark.-Okla.	(*)
Fort Wayne, Ind.	17,400
Fort Worth, Tex.	18,700
Fresno, Calif.	19,300
Gadsen, Ala.	(*)
Galveston-Texas City, Tex.	19,900
Gary-Hammond-East Chicago, Ind.	19,700
Grand Rapids, Mich.	17,700
Great Falls, Mont.	(*)
Green Bay, Wis.	16,200
Greensboro, N.C.	20,000
Greenville, S.C.	18,800
Hamilton-Middletown, Ohio	16,900
Harrisburg, Pa.	17,000
Hartford, Conn.	18,900
Honolulu Hawaii	19,600
Houston, Tex.	20,100
Huntington-Ashland, W. Va.-Ky.-Ohio	17,600
Huntsville, Ala.	$22,500
Indianapolis, Ind.	19,100
Jackson, Mich.	18,700
Jackson, Miss.	20,000
Jacksonville, Fla.	19,800
Jersey City, N.J.	20,600
Johnstown, Pa.	15,600
Kalamazoo, Mich.	20,300
Kansas City, Mo.-Kans.	17,500
Kenosha, Wis.	(*)
Knoxville, Tenn.	19,100
Lafayette, La.	18,800
Lafayette-West Lafayette, Ind.	22,100
Lake Charles, La.	17,400
Lancaster, Pa.	17,800
Lansing, Mich.	19,700
Laredo, Tex.	(*)
Las Vegas, Nev.	20,200
Lawrence-Haverhill, Mass.-N.H.	17,100
Lawton, Okla.	(*)
Lewiston-Auburn, Maine	(*)
Lexington, Ky.	17,700
Lima, Ohio	(*)
Lincoln, Nebr.	17,600
Little Rock-No. Little Rock, Ark.	20,400
Lorain-Elyria, Ohio	18,700
Los Angeles-Long Beach, Calif.	19,700
Louisville, Ky.	19,100
Lowell, Mass.	(*)
Lubbock, Tex.	18,500
Lynchburg, Va.	17,800
Macon, Ga.	19,700
Madison, Wis.	18,500
Manchester, N.H.	(*)
Mansfield, Ohio	(*)
Mayaguez, P.R.	(*)
McAllen-Pharr-Edinburg, Tex.	(*)
Memphis, Tenn.-Ark.	18,400
Meriden, Conn.	(*)
Miami, Fla.	19,600
Midland, Tex.	18,800
Milwaukee, Wisc.	17,500
Minneapolis-St. Paul, Minn.	18,800
Mobile, Ala.	21,100
Monroe, La.	(*)

Table B-8. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA): 1974 (con.)

Location	Salary
Montgomery, Ala.	(*)
Muncie, Ind.	(*)
Muskegon-Muskegon Heights, Mich.	(*)
Nashville, Tenn.	18,000
New Bedford, Mass.	(*)
New Britain, Conn.	(*)
New Haven, Conn.	18,600
New London-Groton-Norwich, Conn.	18,500
New Orleans, La.	18,800
New York, N.Y.	20,500
Newark, N.J.	20,500
Newport New-Hampton, Va.	20,800
Norfolk-Portsmouth, Va.	20,400
Norwalk, Conn.	22,600
Odessa, Tex.	(*)
Ogden, Utah	19,300
Oklahoma City, Okla.	19,400
Omaha, Nebr.-Iowa	16,500
Orlando, Fla.	19,600
Oxnard-Ventura, Calif.	20,700
Paterson-Clifton-Passaic, N.J.	20,200
Pensacola, Fla.	20,100
Peoria, Ill.	19,900
Philadelphia, Pa.-N.J.	19,800
Phoenix, Ariz.	19,000
Pine Bluff, Ark.	(*)
Pittsburgh, Pa.	19,700
Pittsfield, Mass.	18,700
Ponce, P.R.	(*)
Portland, Maine	(*)
Portland, Oreg.-Wash.	18,400
Providence-Warwick-Pawtucket, R.I.-Mass.	17,300
Provo-Orem, Utah	(*)
Pueblo, Colo.	(*)
Racine, Wis.	(*)
Raleigh, N.C.	$18,100
Reading, Pa.	19,100
Reno, Nev.	18,100
Richmond, Va.	18,100
Roanoke, Va.	(*)
Rochester, N.Y.	20,600
Rockford, Ill.	16,200
Sacramento, Calif.	18,800
Saginaw, Mich.	(*)
St. Joseph, Mo.	(*)
St. Louis, Mo.-Ill.	19,600
Salem, Oreg.	14,000
Salinas-Monterey, Calif.	18,700
Salt Lake City, Utah	17,900
San Angelo, Tex.	(*)
San Antonio, Tex.	18,900
San Bernardino-Riverside-Ontario, Calif.	19,800
San Diego, Calif.	19,500
San Francisco-Oakland, Calif.	19,600
San Jose, Calif.	20,300
San Juan, P.R.	(*)
Santa Barbara, Calif.	18,900
Savannah, Ga.	18,400
Scranton, Pa.	(*)
Seattle-Everett, Wash.	18,900
Sherman-Denison, Tex.	(*)
Shreveport, La.	18,000
Sioux City, Iowa-Nebr.	(*)
Sioux Falls, S.D.	(*)
South Bend, Ind.	18,400
Spokane, Wash.	15,700
Springfield, Ill.	19,300
Springfield, Mo.	(*)
Springfield, Ohio	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	16,900
Stamford, Conn.	$22,200
Steubenville-Weirton, Ohio-W.Va.	(*)
Stockton, Calif.	(*)
Syracuse, N.Y.	18,400
Tacoma, Wash.	18,200
Tallahassee, Fla.	17,400
Tampa-St. Petersburg, Fla.	18,400
Terre Haute, Ind.	18,300
Texarkana, Tex.-Ark.	(*)
Toledo, Ohio-Mich.	18,100
Topeka, Kans.	15,900
Trenton, N.J.	19,700
Tucson, Ariz.	17,800
Tulsa, Okla.	19,800
Tuscaloosa, Ala.	15,700
Tyler, Tex.	(*)
Utica-Rome, N.Y.	17,600
Vallejo-Napa, Calif.	(*)
Vineland-Millville-Bridgeton, N.J.	(*)
Waco, Tex.	(*)
Washington, D.C.,-Md.-Va.	23,900
Waterbury, Conn.	16,100
Waterloo, Iowa	(*)
West Palm Beach, Fla.	19,000
Wheeling, W.Va.-Ohio	(*)
Wichita, Kans.	17,400
Wichita Falls, Tex.	(*)
Wilkes Barre-Hazelton, Pa.	(*)
Wilmington, Del.-N.J.-Md.	21,700
Wilmington, N.C.	18,800
Worcester, Mass.	17,600
York, Pa.	16,300
Youngstown-Warren, Ohio	17,700
Other† locations	18,300

* No median salary was computed -- fewer than 20 sample cases reported.
† Includes outlying areas of United States and foreign.
SOURCE: National Science Foundation, National Sample, 1974.

Table B-9. Median annual salaries of full-time employed scientists ar

Location	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
	Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathematicians	Statisticians		Total	Earth scientists	Oceanographers	Atmospheric scientists
All areas, total	$19,500	$18,900	$21,300	$21,700	$19,800	$19,700	$20,000	$18,400	$20,100	$19,700	$20,700	$22,300
SMSA, total	19,700	19,000	21,800	22,200	20,000	19,900	20,200	18,500	20,500	20,300	20,900	22,300
Akron, Ohio	18,400	18,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Albany-Schenectady-Troy, N.Y.	20,600	20,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Albuquerque, N.M.	24,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Allentown-Bethlehem-Easton, Pa.-N.J.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Altoona, Pa.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	20,800	(*)	(*)	(*)	(*)	(*)	(*)	19,700	(*)	(*)	(*)	(*)
Ann Arbor, Mich.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Atlanta, Ga.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	17,300	(*)	(*)	(*)	(*)
Augusta, Ga.-S.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Austin, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Bakersfield, Calif.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Baltimore, Md.	21,100	18,100	(*)	(*)	19,700	19,700	(*)	18,800	(*)	(*)	(*)	(*)
Baton Rouge, La.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Binghamton, N.Y.-Pa.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Birmingham, Ala.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Boston, Mass.	20,800	18,300	24,000	(*)	18,800	(*)	(*)	18,400	22,300	(*)	(*)	(*)
Bridgeport, Conn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Buffalo, N.Y.	18,600	18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Canton, Ohio	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Cedar Rapids, Iowa	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Champaign-Urbana, Ill.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Charleston, W.Va.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Charlotte, N.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Chattanooga, Tenn.-Ga.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Chicago, Ill.	19,200	19,000	22,400	(*)	16,800	18,600	(*)	18,000	(*)	(*)	(*)	(*)
Cincinnati, Ohio-Ky.-Ind.	19,900	19,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Cleveland, Ohio	17,800	16,900	(*)	(*)	(*)	(*)	(*)	16,800	(*)	(*)	(*)	(*)
Columbia, S.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Columbus, Ohio	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Corpus Christi, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Dallas, Tex.	19,600	(*)	(*)	(*)	(*)	(*)	(*)	16,900	22,700	20,800	(*)	(*)
Davenport-Moline, La.-Ill.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Dayton, Ohio	20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Denver, Colo.	18,300	18,100	19,700	(*)	(*)	(*)	(*)	20,400	21,100	20,900	(*)	(*)

gineers by Standard Metropolitan Statistical Area (SMSA) and field: 1974

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
$19,400	$17,800	$17,900	$17,100	$19,700	$19,400	$20,200	$22,300	$19,000	$18,600	All areas, total
19,600	18,700	18,200	18,800	20,100	19,800	20,600	22,800	19,300	19,000	SMSA' total
18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Akron, Ohio
20,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Albany-Schenectady-Troy, N.Y.
20,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Albuquerque, N.M.
20,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Allentown-Bethlehem-Easton, Pa.-N.J.
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Altoona, Pa.
19,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Anaheim-Santa Ana-Garden Grove Calif.
19,200	22,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Ann Arbor, Mich.
18,400	20,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Atlanta, Ga.
20,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Augusta, Ga.-S.C.
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Austin, Tex.
20,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Bakersfield, Calif.
20,200	19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Baltimore, Md.
18,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Baton Rouge, La.
19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Beaumont-Port Arthur-Orange, Tex.
19,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Binghamton, N.Y.-Pa.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Birmingham, Ala.
20,400	21,000	19,700	(*)	(*)	17,900	25,800	(*)	(*)	(*)	Boston, Mass.
19,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Bridgeport, Conn.
18,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Buffalo, N.Y.
17,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Canton, Ohio
17,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Cedar Rapids, Iowa
24,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Champaign-Urbana, Ill.
18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Charleston, W. Va.
18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Charlotte, N.C.
1[illegible],000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Chattanooga, Tenn.-Ga.
19,500	18,900	18,000	(*)	(*)	19,000	25,000	(*)	(*)	(*)	Chicago, Ill.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Cincinnati, Ohio-Ky.-Ind.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Cleveland, Ohio
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Columbia, S.C.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Columbus, Ohio
16,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Corpus Christi, Tex.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Dallas, Tex.
21,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Davenport-Moline, La.-Ill.
20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Dayton, Ohio
19,500	19,300	(*)	(*)	(*)	22,300	21,100	(*)	(*)	(*)	Denver, Colo.

B-9. Median annual salaries of full-time employed scientists a

Location	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
	Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathematicians	Statisticians		Total	Earth scientists	Oceanographers	Atmospheric scientists
Detroit, Mich.	$20,300	$20,000	(*)	(*)	$20,700	(*)	(*)	$20,500	(*)	(*)	(*)	(*)
Durham, N.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Erie, Pa.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Flint, Mich.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Lauderdale-Hollywood, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Wayne, Ind.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Worth, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Galveston-Texas City, Texas	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Gary-Hammond-East Chicago, Ind.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Greensboro, N.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Greenville, S.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Harrisburg, Pa.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Hartford, Conn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	15,400	(*)	(*)	(*)	(*)
Honolulu, Hawaii	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Houston, Tex.	19,800	19,900	(*)	(*)	(*)	(*)	(*)	17,900	$20,600	$20,600	(*)	(*)
Huntsville, Ala.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Indianapolis, Ind.	19,300	19,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Jackson, Mich.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Jacksonville, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Jersey City, N.J.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Kansas City, Mo.-Kans.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Knoxville, Tenn.	20,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lake Charles, La.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lancaster, Pa.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lansing, Mich.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lawrence-Haverhill, Mass.-N.H.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lincoln, Neb.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Los Angeles-Long Beach, Calif.	21,200	18,800	$23,100	(*)	20,300	$20,200	(*)	18,500	19,700	19,800	(*)	(*)
Louisville, Ky.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Madison, Wis.	15,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Memphis, Tenn.-Ark.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Miami, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Midland, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	21,300	21,300	(*)	(*)
Milwaukee, Wis.	16,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Minneapolis-St. Paul, Minn.	17,000	16,700	(*)	(*)	(*)	(*)	(*)	18,300	(*)	(*)	(*)	(*)

gineers by Standard Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
$20,300	$18,000	$16,900	(*)	(*)	$23,400	(*)	(*)	(*)	(*)	Detroit, Mich.
19,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Durham, N.C.
16,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Erie, Pa.
19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Flint, Mich.
17,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Fort Lauderdale-Hollywood, Fla.
17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Fort Wayne, Ind.
19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Fort Worth, Tex.
19,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Galveston-Texas City, Tex.
19,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Gary-Hammond-East Chicago, Ind.
21,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Greensboro, N.C.
18,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Greenville, S.C.
16,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Harrisburg, Pa.
19,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Hartford, Conn.
20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Honolulu, Hawaii
20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Houston, Tex.
23,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Huntsville, Ala.
19,400	15,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Indianapolis, Ind.
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Jackson, Mich.
20,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Jacksonville, Fla.
20,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Jersey City, N.J.
17,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Kansas City, Mo.-Kans.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Knoxville, Tenn.
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lake Charles, La.
17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lancaster, Pa.
19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lansing, Mich.
17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lawrence-Haverhill, Mass.-N.H.
(*)	21,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Lincoln, Nebr.
19,800	19,300	19,100	(*)	(*)	19,500	$17,800	$25,600	(*)	(*)	Los Angeles-Long Beach, Calif.
19,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Louisville, Ky.
18,200	19,600	20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Madison, Wis.
20,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Memphis, Tenn.-Ark.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Miami, Fla.
18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Midland, Tex.
17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Milwaukee, Wis.
18,700	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Minneapolis-St. Paul, Minn.

B-9. Median annual salaries of full-time employed scientists a

	Physical scientists				Mathematical scientists				Environmental scientists			
	Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathematicians	Statisticians	Computer specialists	Total	Earth scientists	Oceanographers	Atmospheric scientists
Nashville, Tenn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New Haven, Conn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New London-Groton-Norwich, Conn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New Orleans, La.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	$20,600	$20,500	(*)	(*)
New York, N.Y.	$19,500	$18,200	$21,100	(*)	$23,400	$22,900	$24,200	$20,200	20,700	21,300	(*)	(*)
Newark, N.J.	20,600	19,900	27,800	(*)	24,700	(*)	(*)	19,300	(*)	(*)	(*)	(*)
Newport News-Hampton, Va.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Norfolk-Portsmouth, Va.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Oklahoma City, Okla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	18,900	18,800	(*)	(*)
Omaha, Nebr.-Iowa	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Orlando, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Oxnard-Ventura, Calif.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Paterson-Clifton-Passaic, N.J.	17,900	17,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Pensacola, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Peoria, Ill.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Philadelphia, Pa.-N.J.	19,900	19,700	22,000	(*)	19,900	(*)	(*)	19,400	(*)	(*)	(*)	(*)
Phoenix, Ariz.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Pittsburgh, Pa.	19,800	18,800	23,500	(*)	(*)	(*)	(*)	17,900	(*)	(*)	(*)	(*)
Pittsfield, Mass.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Portland, Maine	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Providence-Warwick-Pawtucket, R.I., Mass.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Raleigh, N.C.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Reading, Pa.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Richmond, Va.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Rochester, N.Y.	25,200	22,600	(*)	(*)	(*)	(*)	(*)	18,900	(*)	(*)	(*)	(*)
Rockford, Ill.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Sacramento, Calif.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
St. Louis, Mo.-Ill.	20,400	20,700	(*)	(*)	(*)	(*)	(*)	20,400	(*)	(*)	(*)	(*)
Salt Lake City, Utah	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
San Antonio, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
San Bernardino-Riverside-Ontario, Calif.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
San Diego, Calif.	19,400	(*)	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
San Francisco-Oakland, Calif.	19,400	17,000	20,700	(*)	17,200	(*)	(*)	18,300	20,700	20,600	(*)	(*)
San Jose, Calif.	22,300	(*)	22,700	(*)	(*)	(*)	(*)	18,600	(*)	(*)	(*)	(*)
Santa Barbara, Calif.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

gineers by Standard Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
$17,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Nashville, Tenn.
18,605	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	New Haven, Conn.
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	New London-Groton-Norwich, Conn.
18,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	New Orleans, La.
20,600	$20,000	$18,500	(*)	$20,100	$20,900	$19,500	$19,500	$20,800	$17,900	New York, N.Y.
20,500	18,900	17,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Newark, N.J.
21,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Newport News-Hampton, Va.
20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Norfolk-Portsmouth, Va.
19,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Oklahoma City, Okla.
16,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Omaha, Nebr.-Iowa
20,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Orlando, Fla.
20,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Oxnard-Ventura, Calif.
20,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Paterson-Clifton-Passaic, N.J.
19,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Pensacola, Fla.
19,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Peoria, Ill.
19,800	18,700	16,300	(*)	(*)	22,100	19,600	23,800	(*)	(*)	Philadelphia, Pa.-N.J.
19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Phoenix, Ariz.
20,000	(*)	(*)	(*)	(*)	18,700	(*)	(*)	(*)	(*)	Pittsburgh, Pa.
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Pittsfield, Mass.
(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Portland, Maine
17,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Providence-Warwick-Pawtucket, R.I., Mass.
17,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Raleigh, N.C.
19,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Reading, Pa.
18,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Richmond, Va.
20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Rochester, N.Y.
16,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Rockford, Ill.
18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Sacramento, Calif.
19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	St. Louis, Mo.-Ill.
18,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Salt Lake City, Utah
19,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	San Antonio, Tex.
19,400	22,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	San Bernardino-Riverside-Ontario, Calif.
19,800	(*)	(*)	(*)	(*)	22,400	(*)	(*)	(*)	(*)	San Diego, Calif.
19,700	18,700	16,400	(*)	(*)	22,600	17,200	27,800	(*)	(*)	San Francisco-Oakland, Calif.
20,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	San Jose, Calif.
20,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Santa Barbara, Calif.

B-9. Median annual salaries of full-time employed scientists ar

Location	Physical scientists				Mathematical scientists			Computer specialists	Environmental scientists			
	Total	Chemists	Physicists/ astronomers	Other physical scientists	Total	Mathematicians	Statisticians		Total	Earth scientists	Oceanographers	Atmospheric scientists
Seattle-Everett, Wash.	$16,800	(*)	(*)	(*)	(*)	(*)	(*)	$17,600	(*)	(*)	(*)	(*)
South Bend, Ind.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Springfield, Ill.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Stamford, Conn.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Syracuse, N.Y.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tampa-St. Petersburg, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Toledo, Ohio-Mich.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tucson, Ariz.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tulsa, Okla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	$21,300	$21,300	(*)	(*)
Utica-Rome, N.Y.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Washington, D.C.-Md.-Va.	24,300	$22,200	$25,000	$27,300	$22,500	$21,100	$24,200	21,100	23,900	25,000	$21,500	$26,100
West Palm Beach, Fla.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wichita, Kans.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	22,500	22,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Worcester, Mass.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Youngstown-Warren, Ohio	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Other locations†	18,700	18,300	19,200	20,200	19,200	19,200	19,200	17,700	18,500	18,100	(*)	22,200

*No median salary was computed — fewer than 20 sample cases reported salary.
†Includes outlying areas of United States and foreign.
SOURCE: National Science Foundation, National Sample, 1974.

Note: The SMSA's listed below were excluded from this table because fewer than 20 sample cases reported salary.

Abilene, Tex.
Albany, Ga.
Amarillo, Tex.
Anderson, Ind.
Asheville, N.C.
Atlantic City, N.J.
Bay City, Mich.
Billings, Mont.
Biloxi-Gulfport, Miss.
Bloomington-Normal, Ill.
Boise City, Idaho
Brockton, Mass.
Brownsville-Harlingen-San Benito, Tex.
Charleston, S.C.
Colorado Springs, Colo.
Columbus, Ga.-Ala.
Davenport-Moline, La.-Ill.
Decatur, Ill.
Des Moines, Iowa
Dubuque, Iowa
Duluth-Superior, Minn.-Wis.
El Paso, Tex.
Eugene, Oreg.
Evansville, Ind.-Ky.
Fall River, Mass.-R.I.
Fargo-Moorhead, N.D.-Minn.
Fayetteville, N.C.
Fitchburg-Leominster, Mass.
Fort Smith, Ark.-Okla.
Fresno, Calif.
Gadsen, Ala.
Grand Rapids, Mich.
Great Falls, Mont.
Green Bay, Wis.
Hamilton-Middletown, Ohio
Huntington-Ashland, W. Va.-Ky.-Ohio
Jackson, Miss.
Johnstown, Pa.
Kalamazoo, Mich.
Kenosha, Wis.
Lafayette, La.
Lafayette-West Lafayette, Ind.
Laredo, Tex.
Las Vegas, Nev.
Lawton, Okla.
Lewiston-Auburn, Maine
Lexington, Ky.
Lima, Ohio
Little Rock-North Little Rock, Ark.
Lorain-Elyria, Ohio
Lowell, Mass.
Lubbock, Tex.
Lynchburg, Va.
Macon, Ga.
Manchester, N.H.
Mansfield, Ohio
Mayaguez, P.R.
McAllen-Pharr-Edinburg, Tex.
Meriden, Conn.
Mobile, Ala.
Monroe, La.
Montgomery, Ala.
Muncie, Ind.
Muskegon-Muskegon Heights, Mich.
New Bedford, Mass.
New Britain, Conn.
Norwalk, Conn.
Odessa, Tex.
Ogden, Utah
Pine Bluff, Ark.

ineers by Standard Metropolitan Statistical Area (SMSA) and field: 1974 (con.)

Engineers	Life scientists				Psychologists	Social scientists				Location
	Total	Biological scientists	Agricultural scientists	Medical scientists		Total	Economists	Sociologists/ anthropologists	Other social scientists	
$19,200	$18,400	$18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Seattle-Everett, Wash.
18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	South Bend, Ind.
19,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Springfield, Ill.
18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Springfield-Chicopee-Holyoke, Mass.-Conn.
26,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Stamford, Conn.
18,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Syracuse, N.Y.
18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Tampa-St. Petersburg, Fla.
18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Toledo, Ohio-Mich.
17,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Tucson, Ariz.
20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Tulsa, Okla.
17,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Utica-Rome, N.Y.
24,600	20,400	19,700	$21,000	$20,500	$24,500	$25,400	$25,600	(*)	$25,400	Washington, D.C.-Md.-Va.
19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	West Palm Beach, Fla.
17,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Wichita, Kans.
22,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Wilmington, Del.-N.J.-Md.
17,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Worcester, Mass.
18,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	Youngstown-Warren, Ohio
18,500	16,700	17,200	16,400	19,100	18,400	18,000	19,800	17,900	17,200	Other locations†

Ponce, P.R.
Portland, Oreg.-Wash.
Provo-Orem, Utah
Pueblo, Colo.
Racine, Wis.
Reno, Nev.
Roanoke, Va.
Saginaw, Mich.
St. Joseph, Mo.
Salem, Oreg.
Salinas-Monterey, Calif.
San Angelo, Tex.
San Juan, P.R.
Savannah, Ga.
Scranton, Pa.
Sherman-Denison, Tex.
Shreveport, La.
Sioux City, Iowa-Nebr.
Sioux Falls, S.D.
Spokane, Wash.
Springfield, Mo.
Springfield, Ohio
Steubenville-Weirton, Ohio-W. Va.
Stockton, Calif.
Tacoma, Wash.
Tallahassee, Fla.
Terre Haute, Ind.
Texarkana, Tex.-Ark.
Topeka, Kansas
Trenton, N.J.
Tuscaloosa, Ala.
Tyler, Tex.
Vallejo-Napa, Calif.
Vineland-Millville-Bridgeton, N.J.
Waco, Tex.
Waterbury, Conn.
Waterloo, Iowa
Wheeling, W. Va.-Ohio
Wichita Falls, Tex.
Wilkes Barre-Haxelton, Pa.
Wilmington, N.C.
York, Pa.

Table B-10. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974

Location	Doctorate	Professional/ medical	Master's	Bachelor's	Associate	Other degree	No degree
All areas, total	$21,900	$24,900	$19,400	$18,800	$16,000	(*)	$16,400
SMSA, total	22,300	25,600	19,700	19,000	16,000	(*)	16,600
Akron, Ohio	20,500	(*)	19,300	17,600	(*)	(*)	(*)
Albany-Schenectady-Troy, N.Y.	21,500	(*)	20,500	19,300	(*)	(*)	(*)
Albuquerque, N.M.	24,400	(*)	19,500	19,600	(*)	(*)	(*)
Allentown-Bethlehem-Easton, Pa.-N.J.	(*)	(*)	20,400	18,900	(*)	(*)	(*)
Amarillo, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	25,000	(*)	20,700	19,100	(*)	(*)	(*)
Ann Arbor, Mich.	22,800	(*)	20,300	18,400	(*)	(*)	(*)
Atlanta, Ga.	21,300	(*)	18,500	18,000	(*)	(*)	(*)
Augusta, Ga.-S.C.	(*)	(*)	(*)	19,800	(*)	(*)	(*)
Austin, Tex.	16,000	(*)	15,700	17,500	(*)	(*)	(*)
Bakersfield, Calif.	(*)	(*)	20,100	20,700	(*)	(*)	(*)
Baltimore, Md.	23,700	(*)	21,100	19,800	(*)	(*)	(*)
Baton Rouge, La.	19,000	(*)	(*)	17,300	(*)	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	(*)	(*)	(*)	18,700	(*)	(*)	(*)
Binghamton, N.Y.-Pa.	(*)	(*)	(*)	18,400	(*)	(*)	(*)
Birmingham, Ala.	(*)	(*)	(*)	19,200	(*)	(*)	(*)
Boston, Mass.	22,600	(*)	21,400	19,700	15,800	(*)	(*)
Bridgeport, Conn.	(*)	(*)	(*)	20,100	(*)	(*)	(*)
Buffalo, N.Y.	21,600	(*)	18,200	18,200	(*)	(*)	(*)
Canton, Ohio	(*)	(*)	(*)	17,200	(*)	(*)	(*)
Champaign-Urbana, Ill.	23,500	(*)	(*)	(*)	(*)	(*)	(*)
Charleston, W. Va.	(*)	(*)	16,400	18,100	(*)	(*)	(*)
Charlotte, N.C.	(*)	(*)	(*)	17,000	(*)	(*)	(*)
Chattanooga, Tenn.-Ga.	(*)	(*)	(*)	18,100	(*)	(*)	(*)
Chicago, Ill.	22,500	(*)	18,900	18,900	(*)	(*)	18,000
Cincinnati, Ohio-Ky.-Ind.	20,700	(*)	19,500	18,900	(*)	(*)	(*)
Cleveland, Ohio	19,700	(*)	18,800	18,400	(*)	(*)	(*)
Columbia, S.C.	(*)	(*)	(*)	18,000	(*)	(*)	(*)
Columbus, Ohio	19,900	(*)	19,000	18,600	(*)	(*)	(*)
Corpus Christi, Tex.	(*)	(*)	(*)	16,200	(*)	(*)	(*)
Dallas, Tex.	21,600	(*)	19,600	18,700	(*)	(*)	(*)
Davenport-Moline, Iowa-Ill.	(*)	(*)	(*)	21,300	(*)	(*)	(*)
Dayton, Ohio	19,700	(*)	20,300	20,100	(*)	(*)	(*)
Denver, Colo.	22,600	(*)	19,000	19,500	(*)	(*)	(*)
Des Moines, Iowa	(*)	(*)	(*)	15,500	(*)	(*)	(*)
Detroit, Mich.	23,000	(*)	20,300	20,100	(*)	(*)	(*)
Durham, N.C.	22,700	(*)	20,200	(*)	(*)	(*)	(*)
Erie, Pa.	(*)	(*)	(*)	18,000	(*)	(*)	(*)
Flint, Mich.	(*)	(*)	(*)	19,100	(*)	(*)	(*)
Fort Wayne, Ind.	(*)	(*)	(*)	16,500	(*)	(*)	(*)
Fort Worth, Tex.	19,800	(*)	18,200	18,500	(*)	(*)	(*)
Gary-Hammond-East Chicago, Ind.	(*)	(*)	(*)	19,700	(*)	(*)	(*)
Grand Rapids, Mich.	(*)	(*)	(*)	16,000	(*)	(*)	(*)
Great Falls, Mont.	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Greensboro, N.C.	(*)	(*)	(*)	20,200	(*)	(*)	(*)
Greenville, S.C.	(*)	(*)	(*)	16,700	(*)	(*)	(*)
Harrisburg, Pa.	(*)	(*)	(*)	16,950	(*)	(*)	(*)
Hartford, Conn.	23,500	(*)	19,900	18,300	(*)	(*)	(*)
Honolulu Hawaii	20,300	(*)	(*)	19,900	(*)	(*)	(*)
Houston, Tex.	22,200	(*)	19,500	20,000	(*)	(*)	(*)
Huntsville, Ala.	(*)	(*)	22,200	22,900	(*)	(*)	(*)
Indianapolis, Ind.	21,900	(*)	19,500	18,700	(*)	(*)	(*)
Jackson, Mich.	(*)	(*)	(*)	18,000	(*)	(*)	(*)
Jacksonville, Fla.	(*)	(*)	(*)	20,100	(*)	(*)	(*)
Jersey City, N.J.	(*)	(*)	(*)	19,700	(*)	(*)	(*)

Table B-10. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974 (con.)

Location	Doctorate	Professional/ Medical	Master's	Bachelor's	Associate	Other degree	No degree
Kansas City, Mo.-Kans.	$24,500	(*)	$19,000	$16,800	(*)	(*)	(*)
Knoxville, Tenn.	22,000	(*)	19,400	18,300	(*)	(*)	(*)
Lafayette, La.	(*)	(*)	(*)	19,600	(*)	(*)	(*)
Lafayette-West Lafayette Ind.	22,300	(*)	(*)	(*)	(*)	(*)	(*)
Lake Charles, La.	(*)	(*)	(*)	16,800	(*)	(*)	(*)
Lancaster, Pa.	(*)	(*)	(*)	17,400	(*)	(*)	(*)
Lansing, Mich.	21,800	(*)	19,300	18,300	(*)	(*)	(*)
Lexington, Ky.	22,400	(*)	(*)	(*)	(*)	(*)	(*)
Lincoln, Nebr.	22,200	(*)	(*)	15,100	(*)	(*)	(*)
Little Rock-No. Little Rock, Ark.	(*)	(*)	(*)	21,200	(*)	(*)	(*)
Los Angeles-Long Beach, Calif.	22,700	(*)	20,200	19,400	$16,800	(*)	$16,500
Louisville, Ky.	19,800	(*)	17,000	19,400	(*)	(*)	(*)
Madison, Wis.	20,000	(*)	19,600	15,700	(*)	(*)	(*)
Memphis, Tenn.-Ark.	(*)	(*)	(*)	18,600	(*)	(*)	(*)
Miami, Fla.	20,100	(*)	16,500	20,100	(*)	(*)	(*)
Midland, Tex.	(*)	(*)	(*)	18,600	(*)	(*)	(*)
Milwaukee, Wisc.	19,300	(*)	18,400	16,900	(*)	(*)	(*)
Minneapolis-St. Paul, Minn.	23,400	(*)	18,800	18,400	(*)	(*)	(*)
Nashville, Tenn.	18,900	(*)	(*)	16,100	(*)	(*)	(*)
New Haven, Conn.	22,500	(*)	(*)	18,100	(*)	(*)	(*)
New London-Groton-Norwich, Conn.	(*)	(*)	(*)	16,700	(*)	(*)	(*)
New Orleans, La.	19,100	(*)	20,000	18,300	(*)	(*)	(*)
New York, N.Y.	23,900	(*)	20,200	20,200	(*)	(*)	18,900
Newark, N.J.	24,500	(*)	20,600	19,300	(*)	(*)	(*)
Newport News-Hampton, Va.	(*)	(*)	19,500	20,800	(*)	(*)	(*)
Oklahoma City, Okla.	19,500	(*)	19,900	19,300	(*)	(*)	(*)
Omaha, Nebr.-Iowa	(*)	(*)	17,800	16,400	(*)	(*)	(*)
Orlando, Fla.	(*)	(*)	20,400	18,600	(*)	(*)	(*)
Oxnard-Ventura, Calif.	(*)	(*)	22,800	20,500	(*)	(*)	(*)
Paterson-Clifton-Passaic, N.J.	23,200	(*)	21,200	19,700	(*)	(*)	(*)
Peoria, Ill.	(*)	(*)	(*)	19,300	(*)	(*)	(*)
Philadelphia, Pa.-N.J.	22,900	(*)	19,200	19,400	(*)	(*)	(*)
Phoenix, Ariz.	23,300	(*)	18,900	18,900	(*)	(*)	(*)
Pittsburgh, Pa.	23,700	(*)	19,700	19,000	(*)	(*)	(*)
Portland, Oreg.-Wash.	18,900	(*)	18,600	17,800	(*)	(*)	(*)
Providence-Warwick-Pawtucket, R.I.-Mass.	21,700	(*)	17,400	16,600	(*)	(*)	(*)
Raleigh, N.C.	21,400	(*)	18,200	15,800	(*)	(*)	(*)
Reading, Pa.	(*)	(*)	(*)	20,200	(*)	(*)	(*)
Richmond, Va.	20,600	(*)	(*)	18,100	(*)	(*)	(*)
Rochester, N.Y.	26,100	(*)	21,000	19,900	(*)	(*)	(*)
Rockford, Ill.	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Sacramento, Calif.	21,100	(*)	18,900	18,600	(*)	(*)	(*)
St. Louis, Mo.-Ill.	22,500	(*)	18,900	19,300	(*)	(*)	(*)
Salt Lake City, Utah	21,100	(*)	18,100	17,100	(*)	(*)	(*)
San Antonio, Tex.	(*)	(*)	(*)	18,800	(*)	(*)	(*)
San Bernardino-Riverside-Ontario, Calif.	21,300	(*)	21,800	17,900	(*)	(*)	(*)
San Diego, Calif.	22,500	(*)	19,000	18,600	(*)	(*)	(*)
San Francisco-Oakland, Calif.	22,200	(*)	19,700	19,000	(*)	(*)	(*)
San Jose, Calif.	24,400	(*)	21,000	19,200	(*)	(*)	(*)
Santa Barbara, Calif.	(*)	(*)	19,600	20,400	(*)	(*)	(*)
Savannah, Ga.	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Seattle-Everett, Wash.	23,200	(*)	18,400	18,900	(*)	(*)	(*)
Shreveport, La.	(*)	(*)	(*)	18,200	(*)	(*)	(*)
South Bend, Ind.	(*)	(*)	(*)	18,200	(*)	(*)	(*)
Springfield, Ill.	(*)	(*)	(*)	19,100	(*)	(*)	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	(*)	(*)	(*)	18,100	(*)	(*)	(*)
Stamford, Conn.	(*)	(*)	18,400	22,800	(*)	(*)	(*)
Syracuse, N.Y.	21,700	(*)	18,400	17,500	(*)	(*)	(*)
Tallahassee, Fla.	25,900	(*)	(*)	(*)	(*)	(*)	(*)
Tampa-St. Petersburg, Fla.	(*)	(*)	(*)	18,100	(*)	(*)	(*)

Table B-10. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and highest degree held: 1974 (con.)

Location	Doctorate	Professional/ Medical	Master's	Bachelor's	Associate	Other degree	No degree
Toledo, Ohio-Mich.	$21,200	(*)	$17,400	$18,400	(*)	(*)	(*)
Topeka, Kans.	(*)	(*)	(*)	15,800	(*)	(*)	(*)
Trenton, N.J.	23,900	(*)	19,600	17,700	(*)	(*)	(*)
Tucson, Ariz.	22,100	(*)	(*)	16,300	(*)	(*)	(*)
Tulsa, Okla.	(*)	(*)	18,800	20,100	(*)	(*)	(*)
Utica-Rome, N.Y.	(*)	(*)	(*)	17,500	(*)	(*)	(*)
Washington, D.C.,-Md.-Va.	25,500	(*)	23,000	23,400	(*)	(*)	(*)
West Palm Beach, Fla.	(*)	(*)	(*)	18,500	(*)	(*)	(*)
Wichita, Kans.	(*)	(*)	(*)	17,100	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	22,600	(*)	19,700	20,900	(*)	(*)	(*)
Worcester, Mass.	(*)	(*)	(*)	17,000	(*)	(*)	(*)
York, Pa.	(*)	(*)	(*)	16,100	(*)	(*)	(*)
Youngstown-Warren, Ohio	(*)	(*)	(*)	17,400	(*)	(*)	(*)
Other locations†	20,300	(*)	17,800	17,700	$15,700	(*)	$15,800

*No median salary was computed -- fewer than 20 sample cases reported salary.
†Includes outlying areas of United States and foreign.
SOURCE: National Science Foundation, National Sample, 1974.

Note: The SMSA's listed below were excluded from this table because fewer than 20 sample cases reported salary.

Abilene, Tex.
Albany, Ga.
Altoona, Pa.
Anderson, Ind.
Asheville, N.C.
Atlantic City, N.J.
Bay City, Mich.
Billings, Mont.
Biloxi-Gulfport, Miss.
Bloomington-Normal, Ill.
Boise City, Idaho
Brockton, Mass.
Brownsville-Harlingen-San Benito, Tex.
Cedar Rapids, Iowa
Charleston, S.C.
Colorado Springs, Colo.
Columbus, Ga.-Ala.
Decatur, Ill.
Dubuque, Iowa
Duluth-Superior, Minn.-Wis.
El Paso, Tex.
Eugene, Oreg.
Evansville, Ind.-Ky.
Fall River, Mass.-R.I.
Fargo-Moorhead, N.D.-Minn.
Fayetteville, N.C.
Fitchburg-Leominster, Mass.
Fort Lauderdale-Hollywood, Fla.
Fort Smith, Ark.-Okla.
Fresno, Calif.
Gadsen, Ala.
Galveston-Texas City, Tex.
Green Bay, Wis.
Hamilton-Middletown, Ohio
Huntington-Ashland, W. Va.-Ky.-Ohio
Jackson, Mich.
Johnstown, Pa.
Kalamazoo, Mich.
Kenosha, Wis.
Laredo, Tex.
Las Vegas, Nev.
Lawrence-Haverhill, Maine-N.H.
Lawton, Okla.
Lewiston, Okla.
Lewiston-Auburn, Maine
Lima, Ohio
Lorain-Elyria, Ohio
Lowell, Mass.
Lubbock, Tex.
Lynchburg, Va.
Macon, Ga.
Manchester, N.H.
Mansfield, Ohio
Mayaguez, P.R.
McAllen-Pharr-Edinburg, Tex.
Meriden, Conn.
Mobile, Ala.
Monroe, La.
Montgomery, Ala.
Muncie, Ind.
Muskegon-Muskegon Heights, Mich.
New Bedford, Mass.
New Britain, Conn.
Norfolk-Portsmouth, Va.
Norwalk, Conn.
Odessa, Tex.
Ogden, Utah
Pensacola, Fla.
Pine Bluff, Ark.
Pittsfield, Mass.
Ponce, P.R.
Portland, Maine
Provo-Orem, Utah
Pueblo, Colo.
Racine, Wis.
Reno, Nev.
Roanoke, Va.
Saginaw, Mich.
St. Joseph, Mo.
Salem, Oreg.
Salinas-Monterey, Calif.
San Angelo, Tex.
San Juan, P.R.
Scranton, Pa.
Sherman-Denison, Tex.
Sioux City, Iowa-Nebr.
Sioux Falls, S.D.
Spokane, Wash.
Springfield, Mo.
Springfield, Ohio
Steubenville-Weirton, Ohio-W. Va.
Stockton, Calif.
Tacoma, Wash.
Terre Haute, Ind.
Texarkana, Tex.-Ark.
Tuscaloosa, Ala.
Tyler, Tex.
Vallejo Napa, Calif.
Vineland-Millville-Bridgeton, N.J.
Waco, Tex.
Waterbury, Conn.
Waterloo, Iowa
Wheeling, W. Va.-Ohio
Wichita Falls, Tex.
Wilkes Barre-Hazelton, Pa.
Wilmington, N.C.

Table B-11. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974

Location	Business & industry	Educational institutions			Hospital/ clinic	Nonprofit organizations	Federal Government	State government	Local government	Other government	Other
		4-year colleges & universities	2-year colleges	Other							
All areas, total	$19,000	$19,400	$17,400	$19,000	$17,500	$20,100	$21,700	$16,400	$18,900	$19,400	$19,600
SMSA total	19,200	19,800	18,300	19,200	17,700	20,400	22,300	16,800	19,000	19,100	19,900
Akron, Ohio	17,900	22,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Albany-Schenectady-Troy, N.Y.	20,000	23,700	(*)	(*)	(*)	(*)	(*)	19,200	(*)	(*)	19,700
Albuquerque, N.M.	20,600	(*)	(*)	(*)	(*)	20,500	20,500	(*)	(*)	(*)	(*)
Allentown-Bethlehem-Easton, Pa.-N.J.	20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	19,800	15,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	20,100
Ann Arbor, Mich.	19,500	23,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Atlanta, Ga.	18,200	20,300	(*)	(*)	(*)	(*)	22,400	(*)	(*)	(*)	(*)
Augusta, Ga.-S.C.	19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Austin, Tex.	19,000	15,900	(*)	(*)	(*)	(*)	(*)	16,500	(*)	(*)	(*)
Bakersfield, Calif.	(*)	(*)	(*)	(*)	(*)	(*)	20,800	(*)	(*)	(*)	(*)
Baltimore, Md.	19,600	22,900	(*)	(*)	(*)	(*)	21,900	(*)	19,800	(*)	(*)
Baton Rouge, La.	18,100	18,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Binghamton, N.Y.-Pa.	18,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Birmingham, Ala.	18,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Boston, Mass.	20,200	18,900	(*)	(*)	(*)	22,800	22,600	16,300	(*)	(*)	20,800
Bridgeport, Conn.	20,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Buffalo, N.Y.	18,500	21,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	20,300
Canton, Ohio	17,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Cedar Rapids, Iowa	17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Champaign-Urbana, Ill.	(*)	22,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Charleston, W. Va.	17,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Charlotte, N.C.	18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Chattanooga, Tenn.-Ga.	17,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Chicago, Ill.	19,000	19,900	19,100	18,400	20,500	20,800	21,700	(*)	19,800	20,100	19,300
Cincinnati, Ohio-Ky.-Ind.	19,000	19,600	(*)	(*)	(*)	(*)	23,000	(*)	(*)	(*)	(*)
Cleveland, Ohio	18,300	17,500	(*)	(*)	(*)	(*)	24,000	(*)	(*)	(*)	18,000
Columbus, Ohio	18,700	19,500	(*)	(*)	(*)	21,200	(*)	(*)	(*)	(*)	(*)
Corpus Christi, Tex.	16,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Dallas, Tex.	19,100	19,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	19,800
Davenport-Moline, Iowa-Ill.	17,900	(*)	(*)	(*)	(*)	(*)	24,400	(*)	(*)	(*)	(*)
Dayton, Ohio	19,300	18,800	(*)	(*)	(*)	(*)	24,100	(*)	(*)	(*)	(*)
Denver, Colo.	19,000	19,800	(*)	(*)	(*)	(*)	22,300	(*)	18,700	(*)	17,200
Detroit, Mich.	10,100	19,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	21,300	21,700
Durham, N.C.	20,800	22,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

Table B-11. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Business & industry	Educational institutions			Hospital/ clinic	Nonprofit organizations	Federal Government	State government	Local government	Other government	Other
		4-year colleges & universities	2-year colleges	Other							
Erie, Pa.	$17,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Flint, Mich.	18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Lauderdale-Hollywood, Fla.	17,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Wayne, Ind.	15,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Fort Worth, Tex.	18,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Galveston-Texas City, Tex.	20,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Gary-Hammond-East Chicago, Ind.	20,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Grand Rapids, Mich.	17,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Greensboro, N.C.	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Greenville, S.C.	18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Harrisburg, Pa.	16,200	(*)	(*)	(*)	(*)	(*)	(*)	$16,600	(*)	(*)	(*)
Hartford, Conn.	18,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Honolulu Hawaii	17,500	$19,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Houston, Tex.	19,900	23,500	(*)	(*)	(*)	(*)	$22,800	(*)	(*)	$19,700	(*)
Huntsville, Ala.	17,500	(*)	(*)	(*)	(*)	(*)	24,500	(*)	$23,400	(*)	(*)
Indianapolis, Ind.	19,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Jackson, Mich.	18,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Jacksonville, Fla.	20,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Jersey City, N.J.	21,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Kansas City, Mo.-Kans.	16,700	(*)	(*)	(*)	(*)	(*)	21,400	(*)	(*)	(*)	(*)
Kenosha, Wis.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Knoxville, Tenn.	17,000	18,600	(*)	(*)	(*)	(*)	20,700	(*)	(*)	(*)	$18,600
Lafayette, La.	18,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lafayette-West Lafayette, Ind.	(*)	22,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lake Charles, La.	18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lancaster, Pa.	16,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lansing, Mich.	(*)	22,000	(*)	(*)	(*)	(*)	(*)	18,300	(*)	(*)	(*)
Lawrence-Haverhill, Mass.-N.H.	17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lexington, Ky.	(*)	19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lincoln, Nebr.	(*)	21,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lorain-Elyria, Ohio	18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Los Angeles-Long Beach, Calif.	19,800	19,300	$21,000	$21,600	$19,200	$21,600	19,700	16,000	19,500	19,100	19,800
Louisville, Ky.	19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Lynchburg, Va.	18,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Madison, Wis.	(*)	19,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Memphis, Tenn.-Ark.	18,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

Table B-11. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Business & industry	Educational institutions			Hospital/ clinic	Nonprofit organizations	Federal Government	State government	Local government	Other government	Other
		4-year colleges & universities	2-year colleges	Other							
Miami, Fla.	$20,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Midland, Tex.	18,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Milwaukee, Wisc.	17,000	$24,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Minneapolis-St. Paul, Minn.	18,700	22,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	$18,200
Nashville, Tenn.	18,500	18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New Haven, Conn.	18,700	18,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New London-Groton-Norwich, Conn.	17,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
New Orleans, La.	19,500	18,400	(*)	(*)	(*)	(*)	$20,300	(*)	(*)	(*)	14,700
New York, N.Y.	20,600	21,200	$24,000	$20,600	$17,900	$18,800	20,600	$19,600	$17,200	$26,000	20,800
Newark, N.J.	20,400	23,700	(*)	(*)	(*)	(*)	20,600	(*)	(*)	(*)	22,200
Newport News-Hampton, Va.	16,000	(*)	(*)	(*)	(*)	(*)	25,100	(*)	(*)	(*)	(*)
Norwalk, Conn.	22,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Oklahoma City, Okla.	20,100	(*)	(*)	(*)	(*)	(*)	18,600	(*)	(*)	(*)	(*)
Omaha, Nebr.-Iowa	16,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Orlando, Fla.	18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Oxnard-Ventura, Calif.	21,100	(*)	(*)	(*)	(*)	(*)	21,600	(*)	(*)	(*)	(*)
Paterson-Clifton-Passaic, N.J.	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	18,500
Peoria, Ill.	20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Philadelphia, Pa.-N.J.	19,400	19,500	(*)	(*)	(*)	22,200	20,700	(*)	21,000	(*)	21,000
Phoenix, Ariz.	20,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Pittsburgh, Pa.	19,300	20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	21,100
Pittsfield, Mass.	19,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Portland, Oreg.-Wash.	16,800	18,700	(*)	(*)	(*)	(*)	22,300	(*)	(*)	(*)	(*)
Providence-Warwick-Pawtucket, R.I.-Mass.	18,500	18,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Raleigh, N.C.	18,000	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Reading, Pa.	19,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Richmond, Va.	18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Rochester, N.Y.	20,600	20,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Rockford, Ill.	16,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Sacramento, Calif.	18,700	19,800	(*)	(*)	(*)	(*)	19,700	18,500	(*)	(*)	(*)
St. Louis, Mo.-Ill.	19,800	18,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	20,600
Salt Lake City, Utah	17,200	17,700	(*)	(*)	(*)	(*)	20,900	(*)	(*)	(*)	(*)
San Antonio, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	24,100	(*)	(*)	(*)	(*)
San Bernardio-Riverside-Ontario, Calif.	19,300	20,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
San Diego, Calif.	18,700	19,900	(*)	(*)	(*)	(*)	23,700	(*)	(*)	(*)	20,300

Table B-11. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Location	Business & industry	Educational institutions			Hospital/ clinic	Nonprofit organizations	Federal Government	State government	Local government	Other government	Other
		4-year colleges & universities	2-year colleges	Other							
San Francisco-Oakland, Calif.	$20,000	$18,300	$19,200	(*)	(*)	$17,600	$20,800	$17,800	$19,300	(*)	$17,700
San Jose, Calif.	19,900	21,900	(*)	(*)	(*)	(*)	23,800	(*)	(*)	(*)	20,700
Santa Barbara, Calif.	18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Seattle-Everett, Wash.	19,000	18,200	(*)	(*)	(*)	(*)	19,900	(*)	(*)	(*)	20,400
Shreveport, La.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
South Bend, Ind.	18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Springfield-Chicopee-Holyoke, Mass.-Conn.	18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Stamford, Conn.	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Syracuse, N.Y.	18,400	19,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tallahassee, Fla.	(*)	21,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tampa-St. Petersburg, Fla.	18,700	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Toledo, Ohio-Mich.	18,300	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Trenton, N.J.	20,200	19,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tucson, Ariz.	16,000	20,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tulsa, Okla.	19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Utica-Rome, N.Y.	16,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Washington, D.C.-Md.-Va.	22,300	20,100	(*)	(*)	(*)	24,000	24,700	(*)	24,200	(*)	21,000
Waterbury, Conn.	15,800	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
West Palm Beach, Fla.	19,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wichita, Kans.	16,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	21,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Worcester, Mass.	17,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
York, Pa.	16,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Youngstown-Warren, Ohio	17,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Other locations†	18,200	18,600	15,600	18,500	15,800	18,600	19,400	15,600	18,400	20,400	18,700

*No median salary was computed — fewer than 20 sample cases reported salary.
†Includes outlying areas of United States and foreign.
SOURCE: National Science Foundation, National Sample, 1974.

Note: The SMSA's listed below were excluded from this table because fewer than 20 sample cases reported salary.

Abilene, Tex.
Albany, Ga.
Altoona, Pa.
Amarillo, Tex.
Anderson, Ind.
Asheville, N.C.
Atlantic City, N.J.
Bay City, Mich.
Billings, Mont.
Biloxi-Gulfport, Miss.
Bloomington-Normal, Ill.
Boise City, Idaho
Brockton, Mass.
Brownsville-Harlingen-San Benito, Tex.
Charleston, S.C.
Colorado Springs, Colo.
Columbia, S.C.
Columbus, Ga.-Ala.
Decatur, Ill.
Des Moines, Iowa
Dubuque, Iowa
Duluth-Superior, Minn.-Wis.
El Paso, Tex.
Eugene, Oreg.
Evansville, Ind.-Ky.
Fall River, Mass.-R.I.
Fargo-Moorhead, N.D.-Minn.
Fayetteville, N.C.
Fitchburg-Leominster, Mass.
Fort Smith, Ark.-Okla.
Fresno, Calif.
Gadsen, Ala.
Great Falls, Mont.
Green Bay, Wis.
Hamilton-Middletown, Ohio
Huntington-Ashland, W. Va.-Ky.-Ohio
Jackson, Miss.
Johnstown, Pa.
Kalamazoo, Mich.
Laredo, Tex.
Las Vegas, Nev.
Lawton, Okla.
Lewiston-Auburn, Maine
Lima, Ohio
Little Rock-North Little Rock, Ark.
Lowell, Mass.
Lubbock, Tex.
Macon, Ga.
Manchester, N.H.
Mansfield, Ohio
Mayaguez, P.R.
McAllen-Pharr-Edinburg, Tex.
Meriden, Conn.
Mobile, Ala.
Monroe, La.

Table B-11. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and type of employer: 1974 (con.)

Note: The SMSA's listed below were excluded from this table because fewer than 20 sample cases reported salary. (con.)

Montgomery, Ala.
Muncie, Ind.
Muskegon-Muskegon Heights, Mich.
New Bedford, Mass.
New Britain, Conn.
Norfolk-Portsmouth, Va.
Odessa, Tex.
Ogden, Utah
Pensacola, Fla.
Pine Bluff, Ark.
Ponce, P.R.
Portland, Maine
Provo-Orem, Utah
Pueblo, Colo.
Racine, Wis.
Reno, Nev.
Roanoke, Va.
Saginaw, Mich.
St. Joseph, Mo.
Salem, Oreg.
Salinas-Monterey, Calif.
San Angelo, Tex.
San Juan, P.R.
Savannah, Ga.
Scranton, Pa.
Sherman-Denison, Tex.
Sioux City, Iowa-Nebr.
Sioux Falls, S.D.
Spokane, Wash.
Springfield, Ill.
Springfield, Mo.
Springfield, Ohio
Steubenville-Weirton, Ohio-W. Va.
Stockton, Calif.
Tacoma, Wash.
Terre Haute, Ind.
Texarkana, Tex.-Ark.
Topeka, Kans.
Tuscaloosa, Ala.
Tyler, Tex.
Vallejo-Napa, Calif.
Vineland-Millville-Bridgeton, N.J.
Waco, Tex.
Waterloo, Iowa
Wheeling, W. Va.-Ohio
Wichita Falls, Tex.
Wilkes Barre-Hazelton, Pa.
Wilmington, N.C.

Table B-12. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974

Location	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities
	Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D				
All areas, total	$18,400	$18,900	$19,800	$18,100	$22,600	$24,700	$21,300	$19,200	$17,600	$19,600	$18,000
SMSA, total	18,600	19,000	20,000	18,300	23,000	24,900	21,900	19,700	17,800	20,000	18,200
Akron, Ohio	17,300	(*)	(*)	16,700	22,500	(*)	24,500	(*)	17,000	(*)	(*)
Albany-Schenectady-Troy, N.Y.	19,600	18,600	(*)	19,200	23,900	(*)	23,400	21,700	(*)	(*)	18,300
Albuquerque, N.M.	20,400	(*)	(*)	20,300	20,200	(*)	(*)	(*)	(*)	(*)	(*)
Allentown-Bethlehem-Easton, Pa.-N.J.	19,300	(*)	(*)	18,800	24,300	(*)	(*)	(*)	(*)	(*)	(*)
Anaheim-Santa Ana-Garden Grove, Calif.	18,200	(*)	18,800	17,900	24,000	26,400	21,400	(*)	17,900	23,800	19,700
Ann Arbor, Mich.	18,000	(*)	(*)	(*)	(*)	(*)	(*)	25,700	(*)	(*)	(*)
Atlanta, Ga.	18,600	(*)	(*)	18,400	20,000	18,500	20,300	17,800	16,100	18,100	18,000
Augusta, Ga.-S.C.	18,600	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Austin, Tex.	17,200	(*)	(*)	(*)	18,900	(*)	(*)	(*)	(*)	(*)	(*)
Bakersfield, Calif.	20,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Baltimore, Md.	19,700	(*)	20,600	19,300	22,800	23,500	21,500	20,400	17,400	26,000	17,000
Baton Rouge, La.	18,300	(*)	(*)	(*)	20,100	(*)	(*)	(*)	(*)	(*)	(*)
Beaumont-Port Arthur-Orange, Tex.	17,600	(*)	(*)	18,100	23,800	(*)	(*)	(*)	16,800	(*)	(*)
Binghamton, N.Y.-Pa.	18,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Birmingham, Ala.	17,500	(*)	(*)	(*)	(*)	(*)	(*)	(*)	16,900	(*)	(*)
Boston, Mass.	19,000	19,600	21,400	18,600	24,800	26,200	23,500	19,200	17,000	20,700	18,800
Bridgeport, Conn.	20,500	(*)	(*)	20,400	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Buffalo, N.Y.	17,300	(*)	(*)	16,800	22,300	(*)	22,300	23,800	18,200	(*)	16,600
Champaign-Urbana, Ill.	17,200	(*)	(*)	(*)	(*)	(*)	(*)	23,500	(*)	(*)	(*)
Charleston, W. Va.	18,700	(*)	(*)	18,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Chicago, Ill.	17,500	19,900	18,400	17,000	23,700	23,500	23,800	19,600	18,500	20,300	17,000
Cincinnati, Ohio-Ky.-Ind.	16,900	(*)	(*)	16,700	23,200	22,900	23,400	19,200	18,000	(*)	17,500
Cleveland, Ohio	17,300	(*)	18,300	16,600	23,500	26,500	19,900	16,900	16,800	19,700	17,200
Columbus, Ohio	17,700	(*)	(*)	17,600	22,600	(*)	21,300	19,900	17,500	(*)	18,000
Dallas, Tex.	18,500	(*)	20,400	18,200	22,700	20,800	22,800	19,900	19,200	19,200	16,500
Davenport-Moline, Iowa-Ill.	(*)	(*)	(*)	(*)	24,900	(*)	(*)	(*)	(*)	(*)	(*)
Dayton, Ohio	17,700	(*)	19,200	16,800	23,400	25,000	20,800	(*)	17,000	(*)	19,800
Denver, Colo.	18,400	22,800	20,900	17,800	22,200	22,600	22,000	19,800	17,700	21,400	19,100
Detroit, Mich.	19,600	(*)	20,900	19,400	23,400	25,300	22,500	18,500	18,900	22,800	18,900
Durham, N.C.	20,200	(*)	(*)	(*)	(*)	(*)	(*)	22,600	(*)	(*)	(*)
Fort Worth, Tex.	18,300	(*)	(*)	18,600	20,600	20,300	20,800	(*)	(*)	(*)	17,800
Greensboro, N.C.	(*)	(*)	(*)	(*)	22,400	(*)	(*)	(*)	(*)	(*)	18,600
Harrisburg, Pa.	(*)	(*)	(*)	(*)	19,300	(*)	(*)	(*)	(*)	(*)	16,900
Hartford, Conn.	18,700	(*)	19,000	18,700	23,000	25,100	20,700	(*)	17,800	(*)	16,300
Honolulu, Hawaii	19,200	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)

Table B-12. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities
	Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D				
Houston, Tex.	$19,200	(*)	$20,800	$19,100	$23,200	$22,200	$23,600	$21,200	$18,800	$21,200	$18,600
Huntsville, Ala.	19,800	(*)	(*)	19,500	27,200	26,100	(*)	(*)	(*)	(*)	22,200
Indianapolis, Ind.	17,900	(*)	(*)	17,500	20,800	(*)	(*)	(*)	20,300	(*)	19,000
Kansas City, Mo.-Kans.	16,000	(*)	(*)	15,700	23,000	(*)	23,400	(*)	16,500	(*)	19,000
Knoxville, Tenn.	19,200	(*)	(*)	19,000	22,100	(*)	(*)	(*)	(*)	(*)	19,500
Lafayette-West Lafayette, Ind.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	26,800	(*)	(*)	(*)
Lansing, Mich.	18,900	(*)	(*)	(*)	21,700	(*)	(*)	21,500	(*)	(*)	(*)
Los Angeles-Long Beach, Calif.	18,600	$17,400	21,300	18,300	23,300	24,900	22,300	21,100	17,200	20,400	19,000
Louisville, Ky.	16,900	(*)	(*)	(*)	20,900	(*)	21,900	(*)	15,900	(*)	(*)
Madison, Wis.	15,700	15,000	(*)	(*)	20,100	(*)	(*)	19,600	(*)	(*)	(*)
Miami, Fla.	19,400	(*)	(*)	(*)	20,800	(*)	21,100	(*)	(*)	(*)	(*)
Midland, Tex.	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	18,700	(*)	(*)
Milwaukee, Wisc.	15,900	(*)	(*)	15,800	21,600	(*)	21,200	21,500	16,600	(*)	(*)
Minneapolis-St. Paul, Minn.	16,800	(*)	(*)	16,900	21,500	23,000	21,000	22,200	16,600	18,300	18,400
New Haven, Conn.	16,600	(*)	(*)	(*)	(*)	(*)	(*)	22,600	(*)	(*)	(*)
New Orleans, La.	17,600	(*)	(*)	17,100	22,500	(*)	21,000	(*)	15,100	20,600	19,900
New York, N.Y.	19,700	19,400	22,000	19,500	23,100	25,800	21,600	22,500	18,400	19,900	18,900
Newark, N.J.	19,800	22,900	19,400	19,800	25,100	25,600	24,800	18,600	18,300	20,900	18,600
Newport News-Hampton, Va.	21,200	(*)	(*)	(*)	25,500	28,200	(*)	(*)	(*)	(*)	(*)
Ogden, Utah	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Oklahoma City, Okla.	17,800	(*)	(*)	(*)	26,200	(*)	(*)	(*)	20,000	(*)	15,700
Orlando, Fla.	19,200	(*)	(*)	19,200	21,600	21,600	(*)	(*)	(*)	(*)	(*)
Oxnard-Ventura, Calif.	19,600	(*)	(*)	(*)	23,200	(*)	(*)	(*)	(*)	(*)	(*)
Paterson-Clifton-Passaic, N.J.	18,100	(*)	(*)	18,300	25,000	23,700	25,900	(*)	18,000	21,100	(*)
Peoria, Ill.	18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Philadelphia, Pa.-N.J.	18,400	18,900	18,000	18,400	24,600	25,500	22,900	18,600	17,800	22,200	19,100
Phoenix, Ariz.	17,900	(*)	(*)	17,700	20,700	23,400	(*)	(*)	18,500	(*)	18,700
Pittsburgh, Pa.	19,200	(*)	20,900	18,800	24,300	24,900	22,400	19,400	18,100	20,400	17,900
Portland, Oreg.-Wash.	14,600	(*)	(*)	15,000	22,900	(*)	24,200	19,000	17,600	(*)	15,700
Providence-Warwick-Pawtucket, R.I.-Mass.	17,000	(*)	(*)	(*)	18,300	(*)	(*)	19,100	(*)	(*)	(*)
Raleigh, N.C.	19,600	(*)	(*)	(*)	17,900	(*)	(*)	(*)	(*)	(*)	(*)
Richmond, Va.	19,000	(*)	(*)	(*)	18,700	(*)	18,600	(*)	(*)	(*)	(*)
Rochester, N.Y.	19,700	(*)	(*)	18,100	24,200	26,400	20,600	20,500	20,900	(*)	18,800
Sacramento, Calif.	17,800	(*)	(*)	17,800	21,400	(*)	21,300	21,100	(*)	21,200	17,600
St. Louis, Mo.-Ill.	17,600	(*)	(*)	17,300	25,300	26,700	(*)	(*)	(*)	(*)	18,200

Table B-12. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Location	Research and development				Management or administration			Teaching	Production/ inspection	Consulting	Other activities
	Total	Basic research	Applied research	Development/ design	Total	Of R&D	Of other than R&D				
Salt Lake City, Utah	$17,100	(*)	(*)	$17,600	$19,400	(*)	$19,100	(*)	(*)	(*)	$16,200
San Bernardino-Riverside-Ontario, Calif.	17,900	(*)	(*)	(*)	19,700	(*)	(*)	(*)	(*)	(*)	(*)
San Diego, Calif.	19,000	$15,700	$19,700	19,400	24,800	$24,900	(*)	$22,100	(*)	(*)	16,500
San Francisco-Oakland, Calif.	18,900	18,100	21,000	18,600	22,800	25,700	20,800	18,800	$18,900	$20,700	17,000
San Jose, Calif.	19,700	22,600	22,300	19,300	22,800	24,200	22,300	21,800	18,200	(*)	18,400
Santa Barbara, Calif.	18,900	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Seattle-Everett, Wash.	18,300	(*)	20,200	18,300	21,600	24,300	20,100	18,600	16,900	17,000	18,000
Stamford, Conn.	20,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Syracuse, N.Y.	18,700	(*)	(*)	18,700	(*)	(*)	(*)	19,200	16,700	(*)	(*)
Tampa-St. Petersburg, Fla.	(*)	(*)	(*)	(*)	21,400	(*)	(*)	(*)	(*)	(*)	(*)
Toledo, Ohio-Mich.	17,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Trenton, N.J.	19,500	(*)	(*)	18,300	26,200	26,300	(*)	(*)	(*)	(*)	(*)
Tucson, Ariz.	20,100	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Tulsa, Okla.	20,100	(*)	(*)	20,000	20,600	(*)	20,000	(*)	(*)	(*)	18,700
Utica-Rome, N.Y.	(*)	(*)	(*)	(*)	21,300	(*)	(*)	(*)	(*)	(*)	(*)
Washington, D.C.-Md.-Va.	21,800	21,300	22,400	20,200	27,700	28,500	26,700	19,500	21,700	22,600	20,800
West Palm Beach, Fla.	19,000	(*)	(*)	19,000	(*)	(*)	(*)	(*)	(*)	(*)	(*)
Wichita, Kans.	15,300	(*)	(*)	15,500	22,100	(*)	23,700	(*)	(*)	(*)	(*)
Wilmington, Del.-N.J.-Md.	21,400	(*)	22,600	20,600	27,000	28,100	26,500	(*)	18,600	(*)	18,700
Other locations†	17,500	18,400	18,700	16,800	20,500	23,400	19,700	18,100	16,900	18,100	16,200

*No median salary was computed -- fewer than 20 sample cases reported salary.
†Includes outlying areas of United States and foreign.
SOURCE: National Science Foundation, National Sample, 1974.

Note: The SMSA's listed below were excluded from this table because fewer than 20 sample cases reported salary.

Abilene, Tex.
Albany, Ga.
Altonna, Pa.
Amarillo, Tex.
Anderson, Ind.
Asheville, N.C.
Atlantic City, N.J.
Bay City, Mich.
Billings, Mont.
Biloxi-Gulfport, Miss.
Bloomington-Normal, Ill.
Boise City, Idaho
Brockton, Mass.
Brownsville-Harlingen-San Benito, Tex.
Canton, Ohio
Cedar Rapids, Iowa
Charleston, S.C.
Charlotte, N.C.
Chattanooga, Tenn.-Ga.
Colorado Springs, Colo.
Columbia, S.C.
Columbus, Ga.-Ala.
Corpus Christi, Tex.
Decatur, Ill.
Des Moines, Iowa
Dubuque, Iowa
Duluth-Superior, Minn.-Wis.
El Paso, Tex.
Erie, Pa.
Eugene, Oreg.
Evansville, Ind.-Ky.
Fall River, Mass.-R.I.
Fargo-Moorhead, N.D.-Minn.
Fayetteville, N.C.
Fitchburg-Leominster, Mass.
Flint, Mich.
Fort Lauderdale-Hollywood, Fla.
Fort Smith, Ark.-Okla.
Fort Wayne, Ind.
Fresno, Calif.
Gadsen, Ala.
Galveston-Texas City, Tex.
Gary-Hammond-East Chicago, Ind.
Grand Rapids, Mich.
Great Falls, Mont.
Green Bay, Wis.
Greenville, S.C.
Hamilton-Middletown, Ohio
Huntington-Ashland, W. Va.-Ky.-Ohio
Jackson, Mich.
Jackson, Miss.
Jacksonville, Fla.
Jersey City, N.J.
Johnstown, Pa.
Kalamazoo, Mich.
Kenosha, Wis.
Lafayette, La.
Lake Charles, La.
Lancaster, Pa.
Laredo, Tex.
Las Vegas, Nev.
Lawrence-Haverhill, Mass.-N.H.
Lawton, Okla.
Lewiston-Auburn, Maine
Lexington, Ky.
Lima, Ohio
Lincoln, Nebr.
Little Rock-North Little Rock, Ark.
Lorain-Elyria, Ohio
Lowell, Mass.
Lubbock, Tex.
Lynchburg, Va.
Macon, Ga.
Manchester, N.H.
Mansfield, Ohio
Mayaguex, P.R.
McAllen-Pharr-Edinburg, Tex.
Memphis, Tenn.-Ark.
Meriden, Conn.
Mobile, Ala.
Monroe, La.
Montgomery, Ala.
Muncie, Ind.
Muskegon-Muskegon Heights, Mich.
Nashville, Tenn.

Table B-12. Median annual salaries of full-time employed scientists and engineers by Standard Metropolitan Statistical Area (SMSA) and primary work activity: 1974 (con.)

Note: The SMSA's listed below were excluded from this table because fewer than 20 sample cases reported salary. (con.)

New Bedford, Mass.
New Britain, Conn.
New London-Groton-Norwich, Conn.
Norfolk-Portsmouth, Va.
Norwalk, Conn.
Odessa, Tex.
Omaha, Nebr.-Iowa
Pensacola, Fla.
Pine Bluff, Ark.
Pittsfield, Mass.
Ponce, P.R.
Portland, Maine
Provo-Orem, Utah
Pueblo, Colo.
Racine, Wis.
Reading, Pa.
Reno, Nev.
Roanoke, Va.
Rockford, Ill.
Saginaw, Mich.
St. Joseph, Mo.
Salem, Oreg.
Salinas-Monterey, Calif.
San Angelo, Tex.
San Antonio, Tex.
San Juan, P.R.
Savannah, Ga.
Scranton, Pa.
Sherman-Denison, Tex.
Shreveport, La.
Sioux City, Iowa-Nebr.
Sioux Falls, S.D.
South Bend, Ind.
Spokane, Wash.
Springfield, Ill.
Springfield, Mo.
Springfield, Ohio
Springfield-Chicopee-Holyoke, Mass.-Conn.
Steubenville-Weirton, Ohio-W. Va.
Stockton, Calif.
Tacoma, Wash.
Tallahassee, Fla.
Terre Haute, Ind.
Texarkana, Tex.-Ark.
Topeka, Kans.
Tuscaloosa, Ala.
Tyler, Tex.
Vallejo-Napa, Calif.
Vineland-Millville-Bridgeton, N.J.
Waco, Tex.
Waterbury, Conn.
Waterloo, Iowa
Wheeling, W. Va.-Ohio
Wichita Falls, Tex.
Wilkes Barre-Hazelton, Pa.
Wilmington, N.C.
Worcester, Mass.
York, Pa.
Youngstown-Warren, Ohio

APPENDIX C

A Listing of Detailed Statistical Tables in Parts 1 and 2

(NSF 75-333 and NSF 76-323)

Part 1. Demographic and Educational Characteristics

Scientists and Engineers by Field

B-1. Sex and age: 1974
B-2. Race and age: 1974
B-3. Sex and race: 1974
B-4. Sex and highest degree: 1974
B-5. Highest degree and age: 1974
B-6. Highest degree and race: 1974
B-7. Highest degree and nonformal training in 1972: 1974
B-8. Highest degree and nonformal training in 1973: 1974
B-9. Highest degree and professional identification: 1974
B-10. Major subject of study for highest degree held and highest degree: 1974

Women Scientists and Engineers by Field

B-11. Race and age: 1974
B-12. Highest degree and age: 1974
B-13. Highest degree and race: 1974

Part 2. Employment Characteristics

B-1. Employment characteristics, National Sample: 1974

Scientists and Engineers by Field

B-2. Highest degree and employment status: 1974
B-3. Highest degree and type of employer: 1974
B-4. Primary work activity and highest degree: 1974
B-5. Age and type of employer: 1974
B-6. Primary work activity and type of employer: 1974
B-7. Doctorates by primary work activity and type of employer: 1974
B-8. Master's by primary work activity and type of employer: 1974
B-9. Bachelor's by primary work activity and type of employer: 1974
B-10. Highest degree and critical national interest: 1974
B-11. Sex and employment status: 1974
B-12. Age and employment status: 1974
B-13. Race and employment status: 1974
B-14. Receiving Federal support by agency of support and highest degree: 1974
B-15. Receiving Federal support by agency of support and type of employer: 1974
B-16. Receiving Federal support by agency of support and primary work activity: 1974

Women Scientists and Engineers by Field

B-17. Type of employer: 1974
B-18. Primary work activity: 1974
B-19. Median annual salaries by race and age: 1974
B-20. Median annual salaries by highest degree: 1974

Median Annual Salaries of Scientists and Engineers by Field

B-21. Highest degree and type of employer: 1974
B-22. Primary work activity and highest degree: 1974
B-23. Primary work activity and type of employer: 1974
B-24. Doctorates by primary work activity and type of employer: 1974
B-25. Master's by primary work activity and type of employer: 1974
B-26. Bachelor's by primary work activity and type of employer: 1974
B-27. Sex and age: 1974
B-28. Race and age: 1974
B-29. Sex and race: 1974
B-30. Employed in science/engineering and highest degree: 1974
B-31. Employed in science/engineering and type of employer: 1974

APPENDIX D

Reproduction of 1974
Questionnaire and Reference Lists

O.M.B. No. 41-S73084, Approval Expires December 31, 1974

FORM PMS-14A
110-23-731

U.S. DEPARTMENT OF COMMERCE
SOCIAL AND ECONOMIC STATISTICS ADMIN.
BUREAU OF THE CENSUS

1974 NATIONAL SURVEY OF SCIENTISTS AND ENGINEERS

NOTICE - Your report to the Census Bureau is confidential by law (Title 13, U.S. Code). It may be seen only by sworn Census employees and may be used only for statistical purposes.

Please read instructions carefully before answering questions.

Answer as accurately as you can by printing your reply clearly or by entering an "X" in the box next to the appropriate reply.

If the instructions for a question direct you to enter a code and description from a list, please refer to the reference list attached to this questionnaire.

A. Is the information shown in the mailing label above correct?

☐ YES

☐ NO – *Please enter the correct information*

Name

Number and street

City or town | State (if USA) (010) | ZIP code

Foreign country

B. Is this mailing address the same address as your place of residence?

☐ SAME

☐ DIFFERENT – *Please enter your city and State or foreign country of residence.*

City or town | State (if USA) (011) | ZIP code

Foreign country

Dear Friend:

Let us express our appreciation for your cooperation in the 1972 Professional, Technical, and Scientific Manpower Survey which we conducted under the sponsorship of the National Science Foundation. Reports including statistical summaries based on this survey are now being used in analysis and planning by Federal and State manpower agencies, private businesses, nonprofit research organizations, industrial and trade associations, and university scholars.

As you are very likely aware, there have been significant changes in the past few years in the patterns of both public and private expenditures related to science and technology. It is important to know how these changes affect highly trained persons. The sample of persons canvassed in the 1972 survey is unique in its coverage of scientific and technical manpower and, for this reason, the National Science Foundation has asked the Bureau to again survey this panel to obtain current employment information and related data. For the survey to be successful and yield truly representative information, it is important that each person fill out and return his questionnaire.

Please complete the questions which follow on pages 2 through 4 and return your questionnaire in the enclosed preaddressed envelope. For most persons only a portion of the questions are applicable and need to be completed. For some questions you are instructed to enter a code and description from Reference List A, B, or C. These lists are attached to the questionnaire.

Please be assured that the information you provide is confidential by law and may be seen only by sworn Census employees; it cannot be used for anything but statistical purposes and cannot be given to any other Government agency, private concern, or individual except in the form of statistical summaries from which it is impossible to identify information about any particular person.

Your participation in this voluntary survey will be appreciated.

Thank you for your cooperation.

Sincerely,

Vincent P Barabba

VINCENT P. BARABBA
Director
Bureau of the Census

Enclosure

PART I – EDUCATION AND TRAINING

1. EDUCATIONAL ATTAINMENT

How many years of education or formal training BEYOND HIGH SCHOOL have you COMPLETED? (Include college, junior college, graduate school, law school, business college, technical institute, etc., but **do not include** work taken through correspondence courses, on-the-job training, apprenticeship, or at employer's training facility. For any education received in foreign or ungraded schools, mark the equivalent number of years in the regular American school system.)

(012) ☐ 0 years ☐ 1 year ☐ 2 years ☐ 3 years ☐ 4 years ☐ 5 years ☐ 6 years ☐ 7 years ☐ 8 years or more

2. EDUCATION SINCE 1971

a. Since 1971, have you attended any college, university, or other post-high school institution?

(013) 1 ☐ Yes – *Continue with 2b*
2 ☐ No – *SKIP to question 3*

b. List below each institution from which you have obtained or are currently obtaining formal training beyond the high school level and give the other information requested. Begin with the most recent and work back through 1972. Use a separate column for each degree granted or worked for. Designate degrees by abbreviation (e.g., A.A., B.A., M.A., Ph.D., LL.B., M.D., etc.). **Do not include** work taken through correspondence courses, on-the-job training, apprenticeship, or at employer's training facility.

	MOST RECENT	SECOND-TO-LAST	THIRD-TO-LAST
	(014) ☐☐☐	(015) ☐☐☐	(016) ☐☐☐
(1) College, university, etc. *(Enter name, city, and State or foreign country)*	Name City State or foreign country	Name City State or foreign country	Name City State or foreign country
(2) Year attendance ended	(017) 2 ☐ 1972 3 ☐ 1973 4 ☐ 1974 5 ☐ Now enrolled	(018) 2 ☐ 1972 3 ☐ 1973 4 ☐ 1974	(019) 2 ☐ 1972 3 ☐ 1973
(3) Type of degree worked for, if any *(Enter A.A., B.S.E.E., B.A., etc. or mark "None" box)*	(020) ____ x ☐ None	(021) ____ x ☐ None	(022) ____ x ☐ None
(4) Year degree awarded or to be awarded *(Enter year or mark "None" box)*	(023) 19____ x ☐ None	(024) 19____ x ☐ None	(025) 19____ x ☐ None
(5) Major field of study *(Enter code and description from Reference List A.)*	(026) Code ☐☐☐ Description	(027) Code ☐☐☐ Description	(028) Code ☐☐☐ Description

3. OTHER TRAINING SINCE 1971

Aside from formal education, which of the following types of training did you receive in 1972 or 1973?

(Mark the appropriate year for each type of training you have received.)

	(029) 1972	(030) 1973
1. On-the-job training	1 ☐	1 ☐
2. Military training applicable to civilian occupations	2 ☐	2 ☐
3. Extension or correspondence courses	3 ☐	3 ☐
4. Courses at employers training facility	4 ☐	4 ☐
5. Courses at adult education center	5 ☐	5 ☐
6. Other training	6 ☐	6 ☐
7. None	7 ☐	7 ☐

PART II – WORK STATUS

(Complete questions 4 through 9 for column (A) and then for column (B))

	Work status during the last full week in January 1974 (January 20–26) (A)	Work status during the last full week in January 1973 (January 21–27) (B)
4. Were you working during that week?	(031) 1 ☐ Yes, working full time – *SKIP to 6* 2 ☐ Yes, working part time – *Continue with 5* 3 ☐ No, not working – *SKIP to 6*	(032) 1 ☐ Yes, working full time – *SKIP to 6* 2 ☐ Yes, working part time – *Continue with 5* 3 ☐ No, not working – *SKIP to 6*
5. If you worked part time, were you seeking full-time employment?	(033) 1 ☐ Yes, seeking full-time work 2 ☐ No, preferred part-time work 3 ☐ No, full-time work not available	(034) 1 ☐ Yes, seeking full-time work 2 ☐ No, preferred part-time work 3 ☐ No, full-time work not available
6. Were you working in a position related to science or engineering?	(035) 1 ☐ Yes – *SKIP to 9* 2 ☐ No – *Continue with 7*	(036) 1 ☐ Yes – *SKIP to 9* 2 ☐ No – *Continue with 7*
7. If you were working in a position NOT related to science or engineering, what was the MOST important reason for taking this position?	(037) *(MARK ONLY ONE BOX)* 1 ☐ Preferred nonscience or nonengineering position 2 ☐ Promoted out of science or engineering position 3 ☐ Pay was better in nonscience or nonengineering position 4 ☐ Locational preference 5 ☐ Science or engineering position not available 6 ☐ Other – *Specify* ____	(038) *(MARK ONLY ONE BOX)* 1 ☐ Preferred nonscience or nonengineering position 2 ☐ Promoted out of science or engineering position 3 ☐ Pay was better in nonscience or nonengineering position 4 ☐ Locational preference 5 ☐ Science or engineering position not available 6 ☐ Other – *Specify* ____
8. If you were not working, were you principally —	(039) *(MARK ONLY ONE BOX)* 1 ☐ On vacation or otherwise temporarily absent from a job for health or personal reasons 2 ☐ On temporary layoff from a job 3 ☐ Looking for work 4 ☐ Retired 5 ☐ Student 6 ☐ Tending to family responsibilities 7 ☐ Other – *Specify* ____	(040) *(MARK ONLY ONE BOX)* 1 ☐ On vacation or otherwise temporarily absent from a job for health or personal reasons 2 ☐ On temporary layoff from a job 3 ☐ Looking for work 4 ☐ Retired 5 ☐ Student 6 ☐ Tending to family responsibilities 7 ☐ Other – *Specify* ____
9. Were you on a post doctoral appointment?	(041) 1 ☐ Yes 2 ☐ No	(042) 1 ☐ Yes 2 ☐ No

PART III – JOB ACTIVITIES

INSTRUCTIONS FOR COMPLETING QUESTIONS 10–18

a. Complete column (A) for questions 10 through 18 for the job held during the last full week of January 1974 or for your most recent prior job held.

b. Column (B) should be completed if the job you had during the last full week of January 1973 differed from the job described in column (A). If the job was the same, mark (X) the "Same job as column (A)" box at the top of column (B). **NOTE:** Consider a change in jobs to have occurred if there were significant changes in duties, level of responsibility, or occupation even if you continued to work for the same employer.

c. If you held more than one job during the weeks mentioned above, please report **only** the job at which you worked the **greatest** number of hours.

	Job held during week of January 20–26, 1974 or most recent prior job (A)	Job held during week of January 21–27, 1973 (B) — SAME JOB AS COLUMN (A) (043) ☐
10. Where did you work? *Location (city and State or foreign country) of company, business, agency, or other employer.*	(044) ☐☐☐ City _____ (046) ☐☐☐ State or foreign country _____	(045) ☐☐☐ City _____ (047) ☐☐☐ State or foreign country _____
11. What kind of business was this? *Enter code and description from Reference List B. If the organization conducted activities at different locations (e.g., research at one location and manufacturing at another), enter the activity at the location where you worked.*	(048) Code ☐☐☐ Description _____	(049) Code ☐☐☐ Description _____
12. What was your occupation? *Enter code and description from Reference List C.*	(050) Code ☐☐☐ Description _____	(051) Code ☐☐☐ Description _____
13. What work activities were related to this position? *(Mark all activities in which you spent time)*	01 ☐ Management or administration of research and development 02 ☐ Management or administration of other than research and development 03 ☐ Teaching and training –preparing and teaching courses, guiding and counseling students or trainees 04 ☐ Basic research 05 ☐ Applied research 06 ☐ Development – product, process, and technical development 07 ☐ Report and technical writing, editing, information retrieval 08 ☐ Clinical diagnosis – diagnosis, treatment, etc. for patients or clients 09 ☐ Design – of equipment, processes, models; drafting, drawing, blueprints 10 ☐ Quality control, testing, evaluation, or inspection of equipment, materials, devices 11 ☐ Operations – production, maintenance, construction, installation 12 ☐ Distribution – sales, traffic, purchasing, customer and public relations 13 ☐ Statistical work – designing and conducting sample and other surveys, forecasting, statistical analysis 14 ☐ Consulting – on technical aspects of professional, scientific, and management fields or products 15 ☐ Computer applications – programming, data systems analysis, development of programming techniques, controlling computer operations 16 ☐ Other activities – *Specify*	01 ☐ Management or administration of research and development 02 ☐ Management or administration of other than research and development 03 ☐ Teaching and training – preparing and teaching courses, guiding and counseling students or trainees 04 ☐ Basic research 05 ☐ Applied research 06 ☐ Development – product, process, and technical development 07 ☐ Report and technical writing, editing, information retrieval 08 ☐ Clinical diagnosis – diagnosis, treatment, etc. for patients or clients 09 ☐ Design – of equipment, processes, models; drafting, drawing, blueprints 10 ☐ Quality control, testing, evaluation, or inspection of equipment, materials, devices 11 ☐ Operations – production, maintenance, construction, installation 12 ☐ Distribution – sales, traffic, purchasing, customer and public relations 13 ☐ Statistical work – designing and conducting sample and other surveys, forecasting, statistical analysis 14 ☐ Consulting – on technical aspects of professional, scientific, and management fields or products 15 ☐ Computer applications – programming, data systems analysis, development of programming techniques, controlling computer operations 16 ☐ Other activities – *Specify*
14. Among all the activities marked above (in question 13) which in terms of working hours spent was your primary and which was your major secondary activity? *Fill in the appropriate code numbers from the activities in question 13.*	CODE (052) _____ Primary (054) _____ Secondary	CODE (053) _____ Primary (055) _____ Secondary
15. Were you primarily —	*(MARK ONLY ONE BOX)* (056) 1 ☐ Employee of private company, business, or individual for wages, salary, or commissions 2 ☐ Employee of nonprofit organization (excluding government) 3 ☐ Federal government employee 4 ☐ State government employee 5 ☐ Local government employee (city, county, etc.) 6 ☐ Employee of international organization Self-employed in own business, profession, or farm 7 ☐ Own business – not incorporated 8 ☐ Own business – incorporated 9 ☐ Working without pay in family business or farm	*(MARK ONLY ONE BOX)* (057) 1 ☐ Employee of private company, business, or individual for wages, salary, or commissions 2 ☐ Employee of nonprofit organization (excluding government) 3 ☐ Federal government employee 4 ☐ State government employee 5 ☐ Local government employee (city, county, etc.) 6 ☐ Employee of international organization Self-employed in own business, profession, or farm 7 ☐ Own business – not incorporated 8 ☐ Own business – incorporated 9 ☐ Working without pay in family business or farm

PART III – JOB ACTIVITIES – Continued

	Job held during week of January 20–26, 1974, or most recent prior job (A)	Job held during week of January 21–27, 1973 (B) — SAME JOB AS COLUMN (A) ☐
16. Between what dates did you hold this position? *Enter month and year*	(058) From:	(060) From:
	To: (059)	To: (061)
17. What was the basic salary associated with this position? If you were on a post-doctoral appointment, include stipend plus allowances. Indicate whether the figure entered is per year, per month, or per week. (Basic salary refers to salary before deductions for income tax, social security, retirement, etc., but does not include bonuses, overtime, summer teaching, or other payment for secondary jobs.)	(062) $ _____.00	(063) $ _____.00
	(064) 1 ☐ Per year 2 ☐ Per month 3 ☐ Per week	(065) 1 ☐ Per year 2 ☐ Per month 3 ☐ Per week
	If academically employed, mark whether salary is for –	**If academically employed, mark whether salary is for –**
	(066) 1 ☐ 9–10 months 2 ☐ 11–12 months	(067) 1 ☐ 9–10 months 2 ☐ 11–12 months
18a. Was ANY of your work supported or sponsored by U.S. Government funds?	(068) 1 ☐ Yes – *Continue with 18b* 2 ☐ No 3 ☐ Don't know } *SKIP to 19a*	(069) 1 ☐ Yes – *Continue with 18b* 2 ☐ No 3 ☐ Don't know } *SKIP to 19a*
b. Which of the following agencies or departments were supporting the work?	(070) 1 ☐ Department of Housing and Urban Development 2 ☐ Department of the Interior 3 ☐ Department of Labor 4 ☐ Department of Defense 5 ☐ Department of Commerce 6 ☐ Department of Agriculture	(071) 1 ☐ Department of Housing and Urban Development 2 ☐ Department of the Interior 3 ☐ Department of Labor 4 ☐ Department of Defense 5 ☐ Department of Commerce 6 ☐ Department of Agriculture
	(072) 7 ☐ Department of Transportation 8 ☐ Department of Justice Department of Health, Education and Welfare 9 ☐ NIH (National Institutes of Health) 10 ☐ Health Services and Mental Health Administration	(073) 7 ☐ Department of Transportation 8 ☐ Department of Justice Department of Health, Education and Welfare 9 ☐ NIH (National Institutes of Health) 10 ☐ Health Services and Mental Health Administration
	(074) 11 ☐ Office of Education 12 ☐ Other H.E.W. – *Specify*	(075) 11 ☐ Office of Education 12 ☐ Other H.E.W. – *Specify*
	13 ☐ NASA (National Aeronautic and Space Administration)	13 ☐ NASA (National Aeronautic and Space Administration)
	(076) 14 ☐ NSF (National Science Foundation) 15 ☐ EPA (Environmental Protection Agency) 16 ☐ AEC (Atomic Energy Commission)	(077) 14 ☐ NSF (National Science Foundation) 15 ☐ EPA (Environmental Protection Agency) 16 ☐ AEC (Atomic Energy Commission)
	(078) 17 ☐ AID (Agency for International Development) 18 ☐ Other agency or department – *Specify* 19 ☐ Don't know source agency	(079) 17 ☐ AID (Agency for International Development) 18 ☐ Other agency or department – *Specify* 19 ☐ Don't know source agency

PART IV – OTHER INFORMATION

19a. At anytime during calendar year 1973, were you without a job AND actively seeking employment?	(080) 1 ☐ Yes – *Continue with 19b* 2 ☐ No – *SKIP to question 20*
b. For how many weeks were you seeking employment?	(081) ☐ 1 week ☐ 2 weeks ☐ 3 weeks ☐ 4 weeks or more
20. Based on my total education and experience, I now regard myself professionally as a (an) –– *Enter code and description from Reference List C*	(082) Code ☐☐☐ Description _____
21. Listed at the right, are selected topics of critical national interest. If you devote a significant proportion of your professional time to any of these problem areas, please mark the box for the one on which you spend the MOST time. *Mark only one box*	(083) 01 ☐ Health Education: 02 ☐ Teaching 03 ☐ Other 04 ☐ Environment protection, pollution control 05 ☐ Space 06 ☐ Crime prevention and control 07 ☐ Food production and technology 08 ☐ Energy and fuel 09 ☐ Other mineral resources 10 ☐ Community development and services 11 ☐ Housing (planning, design, construction) 12 ☐ Does not apply
22. In the event that it is necessary to contact you to clarify some of the information you provide, may we contact you by telephone? *If "Yes," please enter the telephone number(s) on which you can be reached.*	☐ Yes → Area code / Telephone number ☐ No
23. Please enter the name of a person at an address other than yours through whom you can be reached	Name Address (Number and street) City / State or foreign country / ZIP code
Print your name here	Date prepared

REFERENCE LIST A – MAJOR FIELDS OF STUDY

This list is to be used in answering question 2b about the field(s) in which you have obtained study or training. It is divided into two sections: Section I is a list of fields of academic study generally leading to bachelor's or higher degrees; Section II is a list of fields of study and training below that generally leading to a bachelor's degree.

Please scan the entire list, choose the appropriate answer for the question and then enter the code and description in the appropriate section of question 2b. If none of the categories listed below adequately describes what you were studying or being trained in, use the "Other" category (code 600 or 625) and enter a brief description of what you were studying in the space provided on the questionnaire.

Section I – FIELDS OF ACADEMIC STUDY LEADING TO BACHELOR'S OR HIGHER DEGREES

Code	Description
	Biological and Agricultural Sciences and Related Fields
501	Agriculture, business
502	Agriculture, general
503	Agronomy, field crops
504	Anatomy and histology
505	Animal physiology
506	Animal science
507	Bacteriology, virology, mycology, parsitology
508	Biochemistry
509	Biology, general
510	Biophysics
511	Botany, general
512	Dairy science (dairy husbandry)
513	Entomology
514	Farm management
515	Fish and game or wildlife management
516	Food science (food technology and processing, dairy manufacturing and technology, food industry)
517	Forestry
518	Genetics
519	Horticulture
520	Immunology
521	Microbiology
522	Plant pathology
523	Plant physiology
524	Soil science (soil management, soil conservation)
525	Zoology, general
526	Biological and agricultural sciences, other fields
	Education
527	Biological sciences education
528	Mathematics education
529	Physical sciences education
530	Trade and industrial training
531	Education, other fields
	Engineering
532	Aerospace, aeronautical, astronautical, and related fields
533	Agricultural
534	Architectural
535	Chemical, petroleum refining
536	Civil, construction, transportation
537	Electrical, electronics
538	Engineering sciences, mechanics, physics
539	Engineering, technology
540	Environmental/Sanitary engineering
541	General or unified
542	Industrial
543	Mechanical
544	Metallurgical, materials, ceramics
545	Mining, mineral
546	Naval architecture and marine engineering
547	Nuclear
548	Operations Research/Systems Engineering
549	Petroleum
550	Engineering, other fields
	Health Fields
551	Medicine or premedicine, and clinical medical sciences
552	Nursing (4 year or longer program)
553	Pathology
554	Pharmacology
555	Pharmacy
556	Health professions, other fields (4 year or longer program)
	Mathematical Sciences
557	Mathematics
558	Statistics and actuarial sciences
559	Computer sciences and systems analysis
	Physical Sciences
560	Astronomy
561	Chemistry
593	Geography
563	Meteorology
564	Physics
565	Physical sciences, general
566	Geology and geophysics
567	Oceanography
568	Physical sciences, other fields
	Psychology
569	Clinical
570	Educational
571	General psychology
572	Psychology, other fields
	Social Sciences
573	Anthropology
574	Area studies, regional studies
575	Economics, agricultural
576	Economics, except agricultural
577	Foreign service programs
593	Geography
579	History
580	Industrial relations
581	International relations
582	Political science or government
583	Public administration
584	Social sciences, general
585	Social work, social administration, social welfare
586	Sociology
587	Social sciences, other fields
	Arts, Humanities, and Other Specialties
588	Arts, general
589	Business and commerce, including accounting, hotel and restaurant administration, and secretarial studies
590	English and journalism
591	Fine and applied arts, all fields
592	Foreign language and literature, all fields
593	Geography
594	Home economics, all fields
595	Law or prelaw
596	Library science
597	Military science, including merchant marine deck officer
598	Philosophy, all fields
599	Religion and theology, all fields
600	Other *(Describe briefly under the applicable item on the questionnaire.)*

Section II – FIELDS OF ACADEMIC STUDY AND OCCUPATIONAL TRAINING RELATED TO PROGRAMS BELOW THE BACCALAUREATE

Code	Description
	Data Processing-related fields of study or training
601	Computer programming
602	Computer operating
603	All other data processing fields of study or training
	Engineering-related fields of study or training
604	Drafting and design, all fields
605	Aeronautical technology
606	Architectural or building technology
607	Chemical technology
608	Civil technology
609	Electrical and electronics technology
610	Industrial technology
611	Mechanical technology
612	All other engineering-related fields of study or training
	Science-related fields of study or training
613	Agriculture
614	Forestry
615	Other science-related fields of study or training
	Other fields of study or training
616	Business and commerce-related fields of study or training
617	Craft (skilled) occupations-related fields of study or training (such as carpentry, bricklaying, tool and die making, etc.)
618	Educational-related fields of study or training
619	Home economics
620	Nursing and other health service-related fields of study or training
621	Operative occupations-related fields of study or training (such as machine operation, driving, inspecting, etc.)
622	Police technology or law enforcement
623	Sales and marketing-related fields of study or training
624	Service occupations-related fields of study or training (such as cook, beautician, firefighter, etc.)
625	All other fields of study or training *(Describe briefly under the applicable item on the questionnaire.)*

REFERENCE LIST B – KINDS OF BUSINESSES

This list is to be used in answering question 11 about the kind(s) of business or industry for which you worked. Please scan the entire list, choose the appropriate answer for the question and enter the code and description from this list. If none of the categories listed below adequately describes the kind of business for which you worked, use the "Other" category (code 731).

Code	Description
	Manufacturing
701	Aircraft, aircraft engines, parts
702	Chemicals and allied products
703	Electrical machinery, equipment and supplies for the generation, storage, transformation, transmission, and utilization of electrical energy
704	Electronic apparatus, radio, television and communication equipment and parts
705	Electronic computers, accounting, calculating and office machinery and equipment
706	Fabricated metal products (except ordnance, machinery and transportation equipment)
707	Machinery (except electrical) including engines and turbines, farming and construction machinery, mining, metalworking and other manufacturing and service industry machines
708	Motor vehicles and motor vehicle equipment including trucks, buses, automobiles, railroad engines and cars
709	Ordnance, including manufacture of arms, ammunition, tanks, and complete guided missiles, space vehicles and equipment
710	Petroleum refining and related industries
711	Primary metal industries, including smelting, refining, rolling, drawing, alloying, and manufacture of castings, forgings and other basic metal products
712	Professional and scientific equipment and supplies
713	Other manufacturing including printing and publishing
	Educational Institutions
714	College or university (offering at least a BA degree)
715	Junior college or technical institute
716	Medical school
717	Other educational institutions
	Health Services
718	Hospital or clinic
719	Other medical and health services

Code	Description
	Other Kinds of Business
720	Agriculture, forestry, and fisheries
721	Business, personal, and repair services
722	Construction
723	Engineering or architectural services
724	Finance, insurance, or real estate
725	Mining and petroleum extraction
726	Private, nonprofit organizations other than educational institutions and hospitals
727	Professional and technical societies
728	Research institutions
729	Retail and wholesale trade
730	Transportation, communication, or other public utilities
731	Other *(Describe briefly under the applicable item on the questionnaire.)*
	Public Administration (Include only uniquely governmental activities, such as the U.S. Postal Service, U.S. Air Force, State court, Department of Motor Vehicles, city building inspection, or city public welfare. For example, if you work for the U.S. Postal Service use code 733; Federal public administration; on the other hand, if you work at a Veterans' Administration Hospital, use code 718, Hospital or clinic; if you work at a State university, use code 714, College or university; if you work for a county road building agency, use code 722, Construction; if you work in a Defense Department research laboratory, use code 728, Research institution.)
732	Uniformed military service
733	Federal public administration
734	State public administration
735	Local public administration (city, county, etc.)
736	Other government

REFERENCE LIST C – OCCUPATIONS

This list is to be used in answering questions 12 and 20 about your occupational classification. Please scan the entire list, choose the appropriate entry and enter the code and description from this list. If you cannot find exactly the right entry, please choose the one that comes nearest to it. If none of the entries is at all appropriate, use the "Other" category (code 475) and enter a brief description in the space provided on the questionnaire.

Code	Description
	Engineers, including college professors and instructors
401	Engineer, aeronautical and astronautical
402	Engineer, agricultural
403	Engineer, chemical
404	Engineer, civil and architectural
405	Engineer, electrical and electronic
406	Engineer, industrial
407	Engineer, mechanical
408	Engineer, metallurgical and materials
409	Engineer, mining and petroleum
410	Engineer, nuclear
411	Engineer, environmental and sanitary
412	Engineer, operations research systems
413	Engineer, other fields *(Describe briefly under the applicable item on the questionnaire.)*
	Computer Specialist, including college professors and instructors
414	Computer programmer
415	Computer systems analyst
416	Computer scientist
417	Other computer specialist *(Describe briefly under the applicable item on the questionnaire.)*
	Mathematicians and Statisticians, including college professors and instructors
418	Actuary
419	Mathematician
420	Statistician
421	Operations research analyst
	Physical Scientists, including college professors and instructors
422	Chemist
423	Earth scientists including geologists, geophysicists, etc.
424	Physicist, astronomer
425	Atmospheric scientist, meteorologist
426	Oceanographer
427	Other physical scientist *(Describe)*
	Biological Scientists, including college professors and instructors
428	Agricultural scientists, including foresters and conservationists
429	Biological scientist
430	Biochemist
431	Biophysicist
432	Medical scientist, excluding persons who are primarily medical practioners; see Health Occupations
433	Other biological scientist *(Describe)*
	Social scientists, including college professors and instructors
434	Economist
435	Psychologist
436	Sociologist or anthropologist
437	Other social scientist *(Describe briefly under the applicable item on the questionnaire.)*

Code	Description
	Health Occupations, including persons who are primarily practitioners. Persons engaged primarily in medical research, teaching, and similar activities use code 432, Medical scientist.
438	Physician or surgeon
439	Technician, dental
440	Technician, medical
441	Other health occupation *(Describe briefly under the applicable item on the questionnaire.)*
	Technicians and Technologists, except medical
442	Designer, electronic parts and machine tools
443	Designer, industrial
444	Designer, other
445	Draftsman
446	Surveyor
447	Technician, biological and agricultural
448	Technician, electrical and electronic
449	Technician, construction, highways, and architectural
450	Technician, mechanical
451	Technician, other engineering
452	Technician, physical science
453	Technician, other fields *(Describe briefly under the applicable item on the questionnaire.)*
	Teachers
454	Teacher, elementary school
455	Teacher, secondary school
456	Teacher, college and university, excluding engineering and science *(Engineering and science teachers see codes 401–437 above.)*
	Administrators, Managers, and Officials, excluding farm
457	College president or dean
458	Administrator or manager, scientific and technical research and development
459	Administrator or manager, production and operations
460	Administrator, manager, or official, all other, excluding self-employed
461	Self-employed proprietor
	All Other Occupations
462	Accountant
463	Attorney or judge
464	Sales worker
465	Clerical worker (such as bookkeeper, secretary, etc.)
466	Clergy
467	Craft worker (such as baker, carpenter, electrician, mechanic, repair worker)
468	Farmer (owner, manager, tenant, or farm laborer)
469	Fire fighter or police
470	Laborer, except farm
471	Librarian
472	Merchant or shopkeeper, self-employed
473	Operative (such as assembler, factory worker, miner, welder, truck driver, etc.)
474	Postal worker
475	Other occupations, not specified above *(Describe briefly under the applicable item on the questionnaire.)*

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Other Science Resources Publications

REPORTS	NSF No.	Price
An Analysis of Federal R&D Funding by Function, Fiscal Years 1969-1977	76-325	$2.45
Research and Development in Industry. Funds, 1974; Scientists & Engineers, January 1975	76-322	$2.00
Detailed Statistical Tables. Manpower Resources for Scientific Activities at Universities and Colleges, January 1976	76-321	—
Detailed Statistical Tables. Graduate Science Education: Student Support and Postdoctorals, Fall 1975	76-318	—
Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1975, 1976, and 1977, Volume XXV	77-301	In press
Detailed Statistical Tables. Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1975, 1976, and 1977, Volume XXV	76-315	—
Detailed Statistical Tables. Expenditures for Scientific Activities at Universities and Colleges, Fiscal Year 1975	76-316	—
1985 R&D Funding Projections	76-314	$2.10
National Patterns of R&D Resources. Funds & Manpower in the United States, 1953-1976	76-310	$0.95
Reviews of Data on Science Resources, No. 27, "Education and Work Activities of Federal Scientific and Technical Personnel, January 1974"	76-308	$0.40
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Young and Senior Science and Engineering Faculty, 1974: Support, Research Participation, and Tenure	75-302	$1.70
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HIGHLIGHTS		
"Employment of Academic Scientists and Engineers Increases 3 Percent in 1976"	76-328	—
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"Immigration of Scientists and Engineers Drops Sharply in FY 1973; Physician Inflow Still Near FY 1972 Peak"	74-302	—